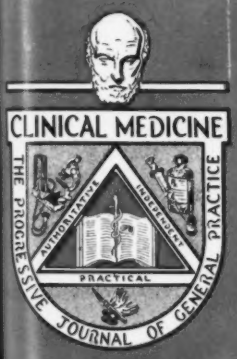
CLINICAL MEDICINE



LEADING ARTICLES

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JAMES E. PAULLIN, A.B., M.D., LL.D., F.A.C.P.

Volume 49 ★ Number 7
JULY, 1942

Clinical Medicine

★ Editorial ★

Dr. James E. Paullin

President, American College of Physicians

WHEN one sees a tall tower, one can be sure that there is an adequate foundation under it, even though one has not witnessed the rather unspectacular processes of sinking caissons and digging trenches for heavy masonry. It is so, also, of men who tower above their fellows in one way or another.

Dr. Paullin, who was inducted as president of the American College of Physicians during the recent meeting at St. Paul, was born at Fort Gaines, Georgia, November 3, 1881; received his A.B. degree from Mercer University (which, in 1929, also made him an LL.D.) in 1900; and his Doctorate in Medicine, from Johns Hopkins Medical School, in 1905. He served his internship at the Rhode Island Hospital, Providence, and Piedmont Hospital, Atlanta, Ga.

In 1907 he joined the faculty of the Atlanta College of Physicians and Surgeons (now Emory University School of Medicine), as instructor in pathology and clinical microscopy, and served in that capacity until 1911. During this time he was also pathologist to the Georgia State Board of Health. This was a splendid foundation for his later eminence as an internist.

In 1917, Dr. Paullin became associate professor of medicine and professor of clinical medicine at Emory University School of Medicine, which positions he now holds. He has also been professor of medicine, *pro tempore*, at the Peter Bent Brigham and Joseph H. Pratt Diagnostic Hospitals, in Boston, and is a diplomate of the American Board of Internal Medicine.

He is a fellow of the A.M.A. (chairman of the Medical Section in 1927) and of the American College of Physicians (ex-regent and chairman of several committees), and a member of his State and County Societies, the Southern Medical Association (chairman of the Medical Section in 1920), the American Clinical and Climatological Society (past-president), and the Association of American Physicians, and is on the staffs of several hospitals.

In World War No. 1, Dr. Paullin served as a major in the Medical Corps, and is doing his part in the present conflict as a member of the Medical Preparedness Committee of the A.M.A. and of the Medical Research Council, Procurement and Assignment Service of the Federal Security Administration. He is also chairman of the Scientific

Committee of the Findlay Institute of the Americas, and has made valuable contributions to the periodical literature in most of the outstanding medical magazines.

It is obvious how well Dr. Paullin has built upon the foundations laid in his earlier years, so that his present position of high honor and responsibility has come as a natural reward for accomplishment, and we can be sure that the affairs of the great College over which he now presides are in worthy and capable hands.

✦

The world's thinking reaches truest and fullest expression in *temperate* minds.—MANLY P. HALL.

✦

Brucellosis

MANY physicians still seem to think that brucellosis is a strictly European disease (because other names for it are "Malta fever" and "Mediterranean fever"), or that it is extremely rare in the United States and is seen only in the South.

As a matter of fact, this disease is not very uncommon in most parts of the country, and is becoming increasingly prevalent. It has been found in most states, *where it is looked for*, but is probably missed more often than it is found, because the clinical diagnosis is not easy and most doctors never think of it. It is transmitted like typhoid, and the same precautions are called for.

The early symptoms are much like those of several other diseases, especially *typhoid*, the main features being a moderately high fever (102° to 104° F.) and rather severe general malaise, with *no local pain or tenderness*, except headache, which may be distressing. The temperature is highest in the afternoon and evening, may be normal or nearly so in the morning, and *continues* for a week or two.

It will be well to get out the textbooks and *study* this disease, *now*, so as to be on the lookout for it. However, none but the *latest* ones will offer any suggestions for treatment.*

Laboratory confirmation of the diagnosis consists of a *moderate leukopenia*, with *relative lymphocytosis*, but especially the *agglutination test* for *Brucella melitensis, B. Abortus, or B. Suis.* If the agglutination test is doubtful or negative, a *skin test* should be made with brucella vaccine. *Cultures* should also be made from the blood, urine, and feces (possibly after passage through a guinea pig), in an attempt to isolate the organism.

Modern *treatment* offers a *serum* (for use in severe cases); a *vaccine*, which is helpful in many cases; *sulfa drugs* (probably Neoprontosil or Sulfathiazole), in adequate doses; *protein shock therapy*, which is rather drastic, and may, perhaps, be substituted by the milder Heteril (Harrower), in doses of from 2 to 4 cc. subcutaneously, twice daily for a week and then once daily; and various forms of *heat treatment*. Otherwise the management is supportive and symptomatic, as in typhoid.

Think of brucellosis in any fever case that *continues* and is not readily diagnosed; watch for it; have the proper laboratory tests made; and report any cases you may encounter to us, so that we may have information to pass on to others.

*A good article on the subject, by Dr. Charles L. Hartsock, appeared in the *Cleveland Clinic Quarterly*, 9:22, 1942.

✦

He that cannot live well today, will be less qualified to live well tomorrow.—MARTIAL.

✦

Realism and Disillusionment

THE present generation has seen the rise to astonishing popularity of a group of writers in various countries who are described as "realists," and whose work is largely characterized by a more or less minutely detailed portrayal of the merely dreary and banal or, more particularly, the sordid, degraded, and indecent aspects of life.

Are culture, dignity, graciousness, delicacy, and beauty in life less *real*, then, than those things which are gross and debasing?

When a man has given his love to one who is unworthy, has been betrayed by a supposed friend, or overreached by his associates, people say, "Ah, he is a disillusioned man."

Are honesty, integrity, faithful friendship, and love generally believed to be "illusions"?

It is unfortunately true that, as society is now constituted, there are many sides of life which are unlovely and all-too-many sets of conditions which are highly deplorable. Those who study such conditions with the idea of learning how to ameliorate them, and describe them in the hope of arousing the interest of those who will be in a position to aid in their correction, do well.

On the other hand, the larger proportion of the "realistic" writers appear to paw over life's dregs for the mere pleasure of reveling unctuously in filth and ordure and for the delectation of those whose jaded nostrils are tickled by the effluvia of the reeking alley and the sewer.

Are the high-hearted romance of Stevenson; the rich and familiar philosophy of Dr. Holmes; the delicious humor of Harry Leon Wilson, at his best; the uprushing sweep of Rupert Brooke; and the keen, spiritual beauty of Olive Schreiner less true and vital presentations of life than Sinclair Lewis' minute dissections of the drearily commonplace; the grim and hopeless tragedy of Gorky and Turgineff; the chuckling obscenities of Rabelais; or the shocking exposure of human muck by Ben Hecht?

At its worst, life sometimes seems to be a questionable boon; at its best it is a noble gift of the High Gods. Most of us carry on between these two extremes and are grateful for whatever will lift us, even for a moment, to a height where the air is purer and the view broader than they are at the level where we ordinarily live.

Our poets, our philosophers, and our romanticists have the power so to lift us; while our "realists" would drag down our souls into the mephitic vapors of depths below depths, or shut

out all the sunshine of joyousness with the thin, gray clouds of dullness and drudgery and doubt.

Most of us do not laugh enough; do not play enough; do not see enough visions. When we can turn, for an hour, from the study or the labor whereby we earn our daily bread, let us turn our faces upward to the sun, not downward to the mire. Let us fill our lungs with the bright, wine-like breeze of the high, clear places, rather than with the choking smog of the lightless valleys of sin and despair.

Love, joy, unselfishness, faith, beauty, and brotherhood are *real* — far more real and infinitely more worthy and helpful than their antitheses. Let us "lift up our eyes unto the hills," and lift up our brothers, also. Let us laugh more, play more, *live more.*

✦

The world would disintegrate but for the fidelity, integrity, and simple goodness of the average man.—Joseph R. Sizoo, D.D., in *Think.*

✦

A New Dress

Several of the situations prophesied in the editorial, "The Paper Situation," in our March issue, on page 64, have come to pass even sooner than we imagined, and you will probably find some further changes in the *appearance* of your old friend, Clinical Medicine, in the next issue.

As we have no news-stand sales, we cannot (even if we wanted to) increase the price of individual copies *100 per cent,* as the *Saturday Evening Post, Colliers,* and several other magazines have done, to take up the slack of the greatly increased cost of paper and printing; we do not want to increase the subscription price unless or until it becomes *absolutely necessary;* neither do we intend (at least for the present) to materially reduce the number of our pages, as many publications are doing.

Our plan to meet the situation is to reduce the *size* of our pages slightly, while keeping the same number, so that the amount of good stuff we give you will not be much less than you have been getting. Moreover, since colored stock for the covers is practically unobtainable (and will probably be entirely "out" quite soon), our covers will be white, but still will carry the attractive design, in two colors, with which you are familiar.

To make up for this small decrease *in quantity,* we hope to *increase* the *quality,* by using a new and decidedly more readable type, more pictures, a more "snappy" set-up of the pages, and, if that is possible, even more brief, practical, helpful articles.

The general arrangement of the Journal will not be changed, so that you will still feel "at home" in it, and we believe you will like the fresh, compact little "book," in its new dress, as well as we like the plans that our printers are making for us.

Send in your comments and contributions, to make it even *better than ever.*

NEXT MONTH

Dr. Beaumont S. Cornell, of Fort Wayne, Ind., will offer some helpful comments in regard to the "nervous colon" that causes symptoms.

Dr. C. C. Atkins, of Rushville, Ind., will report on a useful method for treating respiratory disorders.

Dr. Lake's story of the A. C. P. meeting will be continued.

COMING SOON

"Syphilophobia and Wassermann Reactions," by Wallace Marshall, M.D., Appleton, Wis.

"Intracervical Tamponage with Colloidal Silver in Cervicitis," by Bela C. Balás, M.D., Chicago, Ill.

✦

When one has no design but to speak plain truth, he may say a great deal in a very narrow compass.—Sir Richard Steele.

✦

The Mystery of Typhus

In all great wars of the past, the weapons of the combatants have killed their thousands, but typhus has killed its tens of thousands.

We have discovered the causes of most (but not all) other communicable diseases; and even when we have not recognized the specific agent, we have often been able, by working with laboratory animals, to develop methods of immunization and means for destroying vectors and otherwise limiting the spread of contagion. Not so with typhus, of which we know only that it is carried from the sick to the well by body lice; that it works havoc where people are crowded together under insanitary conditions and lice are plenty; that one attack confers lifelong immunity — if the patient survives; and that something (but not enough) can be done to prevent its spread by general delousing and quarantine.

The mystery of typhus results from the fact, that as yet, no laboratory animal has been found in which the disease can be reproduced as it occurs in human beings, so that its nature and immunologic factors can be studied under test conditions and at leisure.

So far the best animal found for such studies is the Eastern cotton rat; but remembering how the ferret has given us much information about influenza, and the hedgehog about yellow fever, the search for an animal that will help us in the study of typhus still continues.

★ *Leading*  *Articles* ★

Hints to Young Medical Officers

(From an Old One)

By

GEORGE A. SKINNER, M.D., F.A.C.S., D.S.M., Berkeley, Calif.
Colonel, Med. Corps, U.S.A. (Ret.)

COL. SKINNER

The physician who goes into the Army or Navy, enters a world that is largely unfamiliar. Colonel Skinner offers some pertinent suggestions that should help him to orient himself in his new environment more rapidly and easily than he could do without such assistance.

WHEN a young doctor enters the Military Medical Service, either the Army or Navy, as a rule he is in an entirely new environment, which may upset his mental equilibrium to some extent. But really the practice of medicine is essentially the same in any place or language, differing only in details. Our main purpose is to get people well or keep them well, making such repairs first as may be necessary to accomplish our purpose. The little differences that exist between civil and military practice are based upon the actual needs of the moment, and a little foresight in the consideration of these differences may ease up the early days of military practice, and assist in adaptation to the changes necessary for achieving the best results. The quick adaptability of most young medical men, however, makes these changes easy, if they will act with their usual alertness.

The Main Purpose

In general, our purposes in civil and military practices are the same, but in military medicine the start is somewhat different. The great and basic purpose of military medicine is to *keep men from getting sick;* to keep the most men possible on the fighting front. Our business is fighting, to protect our country by attacking the enemy wherever he is, or if attacked, to defend our land with everything in us. Sick men are not only of little use, but are often a great burden, so we must keep in mind our job, that of *keeping men on the firing line.*

This does not necessarily mean in the trenches, making a charge, or taking part in bombing attacks or commando raids. These are all important parts of the day's work, but so also is the task of supplying these fighting men and keeping them fed. It takes husky men, in the best possible physical condition, to keep the supply and repair trucks rolling, to drive the ambulances and carry the litters, to carry messages and keep the telephone and radio communications open, to work untold hours at the operating tables and in the aid stations, to put out fires and dig out the killed and injured after a bombing, to man the demolition squads, and all the other complicated machinery of modern armies. We must have ablebodied men, and it is our task to keep them at their jobs. So, primarily, we are dealing with *preventive* medicine —maintaining health and vigor.

The average civilian doctor sees people only when something is wrong with them, and it is his work to get them well. This also enters into the life of the military medico, for men get sick in the Army and Navy, and they get hurt. These functions are not overlooked, as we have the finest equipment and training available for this phase of our work. But we must keep the preventive aspect first in our minds always. It is our job to figure out how we can serve the greatest number most efficiently to promote our basic purpose—keeping the men "on the line"—and this sometimes works a hardship on an individual.

Civil practice is almost entirely individualistic, and the change to mass practice is difficult for many, especially those who have been established for some time. But it is necessary for military practice, and if it is a question of abandoning a few wounded or saving a regiment, the wounded must be left. We must keep our fighting forces intact, for we are only one member of a great team, working for our side to win. If a player is knocked out, he must be immediately replaced and the game must go on, even though it may seem heartless to the injured. However, we as doctors are not heartless, but the major factor of success for our arms must be kept as primary purpose of our being.

Customs and Courtesies

We hear much of the difficulties of meeting the social customs of the services, but they are really very simple. Most of them are based upon courtesies to older people—something that seems to have largely disappeared from civil life. It means something to be "the Old Man" in a military post, while in civil life it may or may not be a term of affection.

The senior officer is rightly supposed to have had more experience and training than his juniors, and his rank entitles him to a certain respect. This is expressed in many ways, which quickly become

habitual. For instance, the senior officer in a group of two or more always walks on the right. If by chance a junior finds himself on the right side of his senior, he fidgets until he arrives at the left, and then he is at ease. Neither pays any attention to this; it is simply automatic.

If a senior officer enters a room or joins a group that happens to be seated, all will at once come to "attention," unless directed otherwise by the senior. This courtesy is always extended to the ladies, as is the custom also in civil life, in some circles. The senior enters an automobile first and is seated on the right side of the car. He rides at the right if mounted. He receives the salute of his junior, and *he must always return it*. This often falls much harder on the senior than on the junior, because there are fewer of him. I have had my right arm actually tired, during the mobilization of 1917, from returning salutes when walking only a block or two in the streets of a city near a city mobilization center. The salute is an official greeting, and *may not be used by those who have lost that privilege*. For example, prisoners may not salute.

Formalities are abandoned under field conditions, as a rule, but this may change according to circumstances. A command under arms does not ordinarily salute; the commander may call the organization to attention and salute for them, or they may pass without anything more than an informal greeting.

In arriving at a new Army station, it is customary for the officer to report at once to the Adjutant or Executive Officer of the command, and then call upon the Commanding Officer immediately, if he is available. In large commands, however, this usually is at a definite time, which is specified. Ordinary social courtesies are mostly suspended in war time, not because of a change of feeling of the Commanding Officer toward his juniors, but because it is physically impossible for a man to carry out his wishes as well as his obligations. These hints are offered to show that seeming bruskness is often only a manifestation made necessary by rigorous conditions.

When calling on a senior officer, it is well to let the conversation be directed by him. You may be able to tell him a great deal, but his time is valuable, and he can find out more about you in a short time than you can tell him in a day. Be assured that he has a sharp eye out for your talents, and will soon know more about you than you yourself know. It is his job to pick winners, or he does not stay long at the top. So let him do it in his own way, no matter what your accomplishments may be. He knows his job, or he would not be there. Make your call as snappy as possible, and at the first lull, arise to leave. If he wishes you to remain he will let you know it. Never take a seat in his office unless invited to do so.

Problems and Preparation

Having disposed of certain routine formalities and become somewhat accustomed to the beginning of the job, what next?

To my mind the most important "next" is to *use the imagination* and try to visualize what difficulties and complications may be waiting in the future and around many corners, for the officer is now likely to be sent to any part of the world. You know the problems of your own locality. What are those of the localities where you may go?

Suppose you are ordered to join the troops on the Burma Road, as a young friend of mine recently was. What would your problems be there? What do you know about typhus fever and lice, not from a text book, but by *seeing* them? Go to any County Hospital and loaf around a while, and the problem will probably be presented at first-hand as far as the lice are concerned, for practically every city has "flop houses," and unless recently disinfected or "deloused," these will always send their inmates to the hospital with plenty of "exhibits."

The problem of lice is a vital one with troops in the field and in contact with war-time famine and distress. The control of "cooties" is an ever-present liability, and every medical officer should have an answer ready for it, at any time and under difficult conditions.

Do you know how to control rats, fleas, jiggers, leeches, helminths, mosquitoes, ticks, itch mites, flies, cockroaches, bedbugs, and various forms of ringworm? All of these are important field problems in the tropics, and many of them in temperate and frigid climates, and you should get all the possible information on them, not from the standpoint of a big and well-equipped clinic, but in the field and under the stress of war, rapid movement of troops, fatigue to exhaustion, scant food, and scanter medical supplies.

Can you improvise splints out of anything at hand, and get a man back to a dressing station without his dying of shock and pain? What are you going to do for men who are choking from thirst in the heat of the tropics, when there is nothing but water from a swamp or jungle river; where dysentery lurks in every stream and is not killed by chlorine; where leeches are on all the trees and shrubs, on the ground, in the ponds and streams, likely to enter the nose or mouth, and will invariably mass on every uncovered spot of a man's anatomy?

Can you cope with frost bite and frozen parts, likely to take place in the arctics? Do you know the physical and mental strains of our flyers, and what to do for them in case a trained flight surgeon is not at hand? Do you know how to treat burns and shock *yourself*, and not as an assistant?

Your job is to get wise to as many of these things right now as you possibly can; and don't think that, if you are not taking sick call or making an inspection, there is nothing to do. Talk with men who have had experience, and then figure out what you would do under some of the difficulties or unusual circumstances. Ride in tanks, jeeps, trucks, and airplanes and find out, *personally*, what the men endure. Learn about everything possible on wheels and wings, as you may be the only one to get a group out of a jam through this knowledge. Some knowledge of driving a locomotive once got me out of a tight place. The fact that you have observed, experimented and thought along such lines will make unusual situations easier, and stimulate initiative.

Initiative you must have, for you will often be the only one who knows, and will have no highly trained consultant specialists on call, nor a staff of trained nurses to take over the details. What you *yourself* can do will be the answer as to whether the men who depend on you will live or not. It is general practice, *plus*, and you can't know anything that will not be of use in some of these emergencies.

Can you read a map and get out of a tangle with only this source of information? Better learn at once and *never leave your compass at home*. Also,

always have some *matches* for an emergency, in a *water-tight container*, and *keep* them for an *emergency*. Your jack-knife is invaluable, and should always be sharp and ready for business. It has taken me through many tight places. If you can protect your hands with gloves, do so, for your hands must always be ready for an emergency, and you will not always have rubber gloves to protect them, so your skin will have to do the work, and the nearer whole it is, the better it will be for you.

A great deal of thought should be given, by each individual, as to what he can *do without*. I directed my officers, when going overseas in the last war, to make up their minds what was most needed, and arrange to do their own carrying, for mostly, in stress, you have just what you can carry, and no more. If other things are available we enjoy them, but cut your needs to the bone, have it clearly in mind what they are, and keep them in order and always available. You can't be careless, for there is no dime store available in the jungle, and if you haven't it, you go without, for no one else has anything he does not need.

It is much better to go thirsty than to drink infected water, and all water in the tropics (and most other places), that is not processed in some way, is decidedly unsafe. We protect our troops from everything we can, but there are enough dangers left over. Water is something we must have to live, and the greater the need of water, the more likely it is to be dangerous. Therefore learn everything you can about the protection of water supplies, and if you can't do more than filter out the leeches, frogs, lizards, and snakes, that will help some, but go as far as you can, under the circumstances, to protect your command and yourself from *all* the dangers.

Perhaps you have concluded that is is no easy task to be a medical officer in war times. If anyone has an idea that he is going into a snap or soft berth, he had better get rid of that idea at once. It is *worthy* work and will take the best of everything you have; and all the time you will be wishing you knew more and could do better. But you will be rewarded by the affectionate friendship of officers and men, who look to you as one of the most important factors of safety if they are injured or sick. *Don't let them down!* It is up to you to be always ready for duty, always as physically fit as is humanly possible, for a medical officer who is knocked out by anything he can prevent is unforgivable, when times of stress are upon us. If you are on leave you may relax, but when on duty a medical officer has no time off, for sickness and injuries do not move according to drill schedules or time tables.

Make yourself ready for a hard job and deliver the best you have for the good of the country. In no way can a man serve his nation more than by protecting the fighting forces, which will determine whether we continue to exist as a nation of free people. On no one do the fighting forces depend more than upon their Medical Department, for it not only keeps men on the line, but is one of the greatest sources of replacement, after a war has been in progress a few months.

Your job is a big and important one. We who are older envy you your opportunity. Go in and win.

640 The Alameda.

Hydrogel Therapy In Delayed Allergic Reactions

(A Preliminary Discussion)

By

ALBERT E. MAN, M.D., New York, N. Y.

There is a definite place in the current literature for suggestions based upon clinical observations, even when these have not been confirmed, as they may stimulate others to furnish the confirmation or demonstrate clearly that the hypothesis advanced is unsound.

THE introduction of hydrogel products in the management of colonic stasis marked an advance in therapy which has been almost entirely neglected in the literature, considering its importance.

The laxative effectiveness of agar-agar, psyllium seed, *Plantago ovata* seed, etc., has been widely accepted by the medical profession and the laity as a marked improvement over chemical laxatives and mineral oil. As to the latter, its disadvantages far outweigh its usefulness. Seepage, rectal irritation, carcinogenic attributes, deviation of vitamins, and many other disqualifications, have relegated this once-popular substance to the limbo of therapeutic failures.[1]

Certain workers, notably Stein and Gelehrter,[2] Friedberg,[3] and Barowsky,[4] have remarked upon the subjective sense of well-being observed in patients who have been given a hydrogel product, having as its base the epidermal layer of *Plantago ovata*. They have also noted that the administration of the substance is safe when given in the presence of gallbladder disease and various gastrointestinal disorders.

However, it has so far been deemed but a fortuitous, unlooked for, and unexplained fact that the subjective feeling of euphoria noted by the patient has occurred. No one has attempted to explain it. No one has attempted to evaluate it. No one has investigated its implications.

Having, myself, noted this marked improvement in the state of wellbeing after using this product for a reasonable time, I was impelled to make an investigation of this situation. It did not seem to be due to laxation, as most of these patients had been using laxatives for years, with no marked improvement in their general condition. Shortly after changing to the hydrogel product, a change in the physical condition often occurred, so marked that the patient noted it and passed his observation on to the physician.

The product used in this study is made from the epidermal layer of *Plantago ovata* and will

absorb at least 25 times its weight of water,[3] and this sponge-like quality results in a large, soft stool, which is not only easily evacuated, but apparently is capable of holding water-soluble toxins and allergens to the extent of definitely diminishing their absorption from the colon.

This observation is the result of noting unexpected recoveries from migraine, urticaria, eczema, etc., in patients using the hydrogel for the relief of colonic stasis. In none of the cases observed was this result anticipated or suggested. It would seem that the dramatic relief experienced by these patients who were suffering from allergic disorders, might be due to the ability of the product to hold water-soluble allergens against the absorptive capacity of the mucous membrane of the colon.

It has been amply demonstrated, by x-ray studies and otherwise, that the interval between the ingestion of a barium meal and its expulsion may vary from 24 hours to several days. Barowsky,[4] in a study of 26 cases, showed that the emptying time of the colon of constipates varied from 72 to 216 hours. He also noted marked relief from symptoms, as well as a reduction in the emptying time by as much as 96 hours, in severe cases, after giving the hemicellulose.

Delayed Allergic Reactions

Many observers have noted that the prodromes of migraine, which is now considered by many to be an allergic disease, frequently appear many hours after the offending food has been ingested. Balyeat,[5] commenting on a certain case, writes: "In his case an interval of 20 hours was shown to be of diagnostic value. He knew his interval was 20 hours between ingestion and symptoms, therefore a food diary was used." In another case cited he states: "Trials indicated that 2 or 3 teaspoonfuls of milk would cause headache in 48 hours." An attempt to secure tolerance failed. This patient was a woman aged 47 years, who had suffered from headache every few days for ten years. She also suffered from perennial hay fever and colitis. Accompanying the attacks of migraine there was nasal obstruction, puffiness of the lips, and swelling of the eyes. She was sure milk would bring on symptoms. Balyeat continues: "Passive transfer (by the method of Prausnitz and Kustner) was accomplished, supporting the theory of atopic hypersensitiveness as a basis for headache. Why is there such a delay between ingestion and symptoms? It appears that the milk must reach a certain position in the gastro-intestinal tract before it is absorbed and induces symptoms."

It is my opinion that, in this case and many other similar cases recorded in the literature, the offending allergen is not the whole protein, but a simpler, probably intermediate, by-product of protein destruction caused by the action of enzymes and the flora of the colon. In the case of milk, this substance is acted upon by rennin, pepsin, hydrochloric acid, pancreatic enzymes, and bacteria in the period of 20 to 24 hours after ingestion. By this time the results of the digestive processes are no longer to be identified chemically with the milk at the time of its ingestion.

Balyeat also reports another case, with this comment: "This patient presents three interesting points: First, she had a chronic type of migraine that could be relieved practically entirely by specific food elimination; second, a food which *was entirely negative to the scratch and intradermal method* of testing was one of the sources of her headaches; third, like many other patients with rather a severe type of migraine, she came suffering from some other allergic disease, in this case asthma."

The fact that this patient was negative to an intradermal test of a food that caused an attack, suggests that the protein or pre-allergen did not become offensive until after it had been partially broken down and converted into some allergenic substance not found excepting in the intestinal tract after enzymic or bacterial degradation, or both. This substance may prove to be peptone or something closely allied to it.

Since proteins are broken down into simpler forms during digestion, it is quite possible that the newer fractions might prove to be the allergenic factors. Were it possible to detect such allergens in the stool, and administer intradermal tests using the isolated substance, it seems not unreasonable that positive skin tests might be elicited.

Whether or not intradermal or scratch tests, using the colon contents as a source of allergen, has been attempted I do not know, and several allergists have told me that they know of no such work. If it has not so far been done, I recommend that a study of this sort be undertaken by some one properly equipped and qualified to accomplish it.

Referring briefly to the nature of antigens, Bray[6] and others, especially Avery and his coworkers,[7] have shown that the allergenic factor in many proteins is not necessarily protein in nature. The specificity of bacterial proteins has been shown, by this worker, to be an associated carbohydrate radical.

Summary

1. There is evidence that many food proteins and other substances do not become offending allergens until they reach the colon and become intermediate or end-products of digestion, bacterial degradation, or both.

2. The fact, that hydrogel acts like a sponge in holding water (and possibly soluble toxins and allergens) against the absorptive capacity of the colon, suggests its clinical value in certain diseases of allergenic origin.

3. It is suggested that further studies be made to determine whether or not the stool may contain allergenic substances, not detectable in the ingested food known to precipitate an attack.

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65 Central Park West.

Local Injections of Colloidal Silver in Tonsillitis

By

S. Sabourin, M.D., Bonnyville, Alberta, Can.

Most cases of tonsillitis are treated by general clinicians, and Dr. Sabourin shows how even the most troublesome cases can be managed satisfactorily.

FOR the past ten years, I have been treating tonsillitis with local injections of colloidal silver. The good results obtained in more than 150 cases have been gratifying.

As this treatment seems unknown in America (at least I have read nothing on the subject in Canada), I have decided to publish the result of my work, together with a few observations made during the past few years. I was able to follow closely a few cases treated in the hospital. Others, commonly called lacunar or catarrhal, coming to me from great distances, were less easy to follow. A few have reported personally by letter; others, through friends sent to me for treatment. From these reports, I have been led to believe that most patients have been free from throat trouble ever since.

The idea of treating peritonsillar abscesses or quinsy with colloidal silver is not new. Netter, in 1902, was the first to discover its effectiveness and, following his observations, many French doctors reported on the subject. Gastaldi, Bouquet, Roger, Triboulet, and many others confirmed the good results obtained in quinsy from Electrargol in intramuscular and intravenous injections. Netter employed Electrargol by inunction, and I, also, have used it in that way.

Electrargol is obtained by the electric method of Bredig. A Voltaic arc is made to pass through distilled water between two electrodes of the same metal (in this case, silver). The cathode electrode is disintegrated and the water is charged with extremely small particles, visible only by the ultramicroscope, which are electrically charged, as shown by their brownian movements. The electric colloids are distinct from the chemical ones, whose particles are larger and deprived of electrical energy.

Colloidal silver, electrically obtained, stabilized with gelatin to prevent its precipitation in contact with the electrolytes of the tissues, and isotonized with sodium chloride, constitutes Electrargol, which contains 400 mg. of silver to 1,000 cc. It is a powerful bactericide because of its silver, and by its catalytic function it promotes the natural defenses of the organism.

In 1907, impressed by results obtained in infections, Dr. Bourgeois, a French rhinologist, decided to inject Electrargol locally in peritonsillar abscesses. He published many observations attesting its effectiveness.

This method has marked advantages: The quantity necessary is much smaller, eliminating shock or reactions (although Electrargol is practically non-toxic), and it places the colloidal silver where it is most needed—around the blood vessels immediately adjacent to the site of infection.

In 1930, Dr. Antonio Giorgi, in his "*Thèse de la Faculté de Médecine de Paris*," reported the results of many years of observation on the subject, and I was so much impressed that, a few weeks later, I began to use the treatment in quinsy. The results I have obtained confirm these observations. I have since extended its application to lacunar and catarrhal cases, completing and perfecting the technic, which is simple. Most of the patients can go home immediately after treatment, but it is desirable to hospitalize patients with severe general symptoms until the fever has subsided.

Quinsy

Quinsy cases are amongst the most aggravating in medicine. In spite of antiseptic irrigations, gargles, swabbing with different substances, ice packs, or moist heat, the dysphagia and general symptoms persist for many days. The patient is miserable and discouraged, hoping the abscess will form, break of itself, or give the surgeon a chance to operate, and then he is lucky if the knife finds the pus pocket, even in seemingly ripe abscesses. Alimentation is impossible, beyond a small quantity of fluids.

If the Electrargol injection is made in the first two days, the patient, as a rule, is well in from 24 to 48 hours. If done later, it either cuts short the course of the disease or brings the abscess to a head in a few hours. In other words, it shortens considerably the presuppurative period and promptly relieves the pain and dysphagia.

Immediately after the injection there is a local reaction, with rather more dysphagia, and the temperature may arise slightly, but this is of short duration. Pain is the first symptom to disappear, then the fever, and finally the swelling. From then on, no sedatives are required.

The first morning after the injection, the patient eats his breakfast and affirms that he feels well. No further treatment is necessary. A few gargles with potassium chlorate are, however, permissible. If the case has already gone over the borderline, the abscess breaks during the first night, and the patient expectorates pus and feels much relieved.

The local injection of Electrargol must be made where the abscess is likely to form, which, in most cases, is the antero-superior part of the tonsil and pillar. The swelling extends to the adjacent soft palate and the edematous uvula is pushed to the opposite side, which is sometimes involved to a lesser degree.

The postero-superior variety is met with less frequently. It develops between the tonsil and the posterior pillar. The uvula and the soft palate are less swollen, and these posterior abscesses are less voluminous. In practice, the injection should be made where the redness and swelling are most pronounced (see Fig. 1).

Technic

No anesthetic is required. Good lighting is imperative. I use Klaar's mirror (see Fig. 2),* which leaves both hands free and also protects part of the face and eyes. A gauze mask, of course, covers the mouth and nose.

*Any good headlight, on a band, leaves both hands free and should serve the purpose reasonably well.—Ed.

The patient sits in front of the surgeon, his mouth level with the operator's eyes. A Luer glass syringe, 2 or 3 cc., similar to the one used in local anesthesia of the throat, is well adapted to a long, fine needle, the tip of which should be short-bevelled and sharp. The Electrargol is isotonized, in a small, sterile glass, with the solution of sodium chloride provided for the purpose, and the syringe is filled.

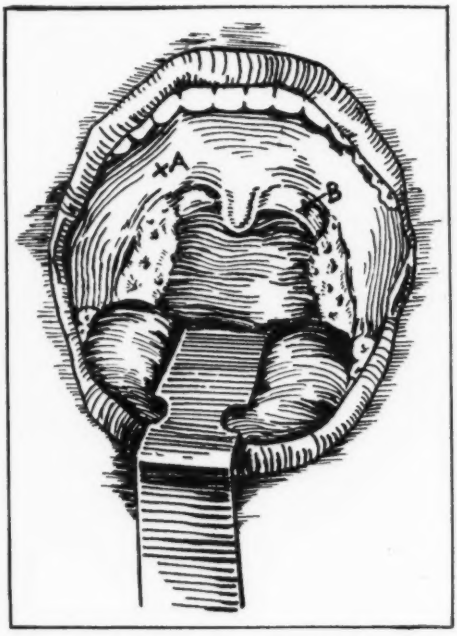


Fig. 1: Sketch showing site of injection. (A, anterior pillar; B, posterior Pillar.)

A tongue depressor is introduced and, where trismus is considerable, a mouth gag is put in place. The tip of the needle is inserted at the site of maximum swelling, and from 0.5 to 1.5 cc. is injected. The injection should be interstitial and just puncture the superficial membrane, otherwise the Electrargol will flow back toward the throat and the treatment will fail. If this should happen, the needle should be withdrawn and inserted anew. When successful, a bluish, blister-like swelling will appear. The patient immediately experiences a moderately severe pain radiating toward the corresponding ear, which lasts, at the most, from 15 to 20 minutes.

Ordinarily the result is spectacular: Pain disappears in the course of the next few hours; the fever, which had slightly risen at first, decreases; and the patient experiences a general sense of well-being, after days of torture. Even if some swelling still persists, the patient claims that he is cured and wants to be discharged. This, however, should be done only after the swelling has subsided, in the course of a couple days.

Chronic Lacunar Tonsillitis

These are the cases presenting recurrent pain and stiffness in swallowing, with crypts filled with caseum. The tonsils may be found of normal size, enlarged, or shrunk. They may even be almost completely encapsulated, until only a limited part of them is visible. On the least occasion, such as a draft of cold, damp air, a stiffness in swallowing is felt, sometimes with vague pains in the limbs.

Courtesy V. Mueller & Co.
Fig. 2: The Klaar headlight.

These patients are continually on the verge of quinsy, with all its manifestations.

Though I remove such tonsils whenever they are too badly diseased or if the patient insists, I also use the Electrargol treatment, with a special technic. It is my opinion that too many tonsillectomies are performed. In clinics in the old country, 25 to 30 years ago, and even here in Canada, I have seen tonsils removed (?) by the hundreds, without an anesthetic, by the quickest and crudest of methods, much as teeth with every degree of decay were extracted before the science of dentistry found that many of them could be preserved by proper treatment.

Tonsils probably play an important part in preserving health, and we have become more and more conservative regarding them, and are striving to find a way to preserve these glands, whose utility is generally conceded. I have, I believe, a treatment to cure and preserve them in most cases, based upon my experience in the past ten years.

Technic

For treating chronic tonsil cases, the equipment is the same as for acute cases, with the addition of a tonsil suction pump (see Fig. 3) or fine suction cannula, electrically operated; a pliable metallic applicator; a curved tonsil knife; and a pillar retractor.

Nupercain solution, 2 percent, or cocaine, 20 percent, is well painted or sprayed on all the surfaces of the tonsils, pillars, base of the tongue, and uvula, to prevent gagging, and repeated at short intervals until anesthesia is complete. The Electrargol solution is prepared and a 3 cc. syringe, with the adapted needle, is filled. One 5 cc. Electrargol ampule should be ample for the whole treatment.

Explore all the crypts with a small stylet or applicator, and open them with the knife, if necessary. Squeeze the tonsil between the flat end of the retractor, on the inside, and a finger behind the angle of the jaw, on the outside. With the suction pump, aspirate all pus and caseum.

Twist a small piece of absorbent cotton on the tip of the curved applicator, soak it in Electrargol solution, and massage all the sinuses and crypts,

changing the cotton for each one. Use the same treatment on both sides. If necessary, an assistant can support the patient's head and hold the tongue depressor. Next comes the most important part of the treatment.

Courtesy V. Mueller & Co.
Fig. 3. Electric Suction Pump.

Insert the needle in the antero-superior part of the pillar, close to its junction with the soft palate, and inject, interstitially, 1.5 cc. of Electrargol, on each side. If successful, the bluish, blister-like swelling appears and pain is felt toward the ear. The patient may rest for a few minutes, and is then discharged, with instructions to report in 2 or 3 months, if symptoms recur.

Typical Case Reports

Case 1: Mr. H. L. complained of a very sore throat for three days, with complete failure of all usual treatments. His temperature was 101° F. It was impossible for him to swallow even water, which came back through his nose. He was very miserable. *Examination* showed the right anterior pillar, tonsil, and uvula pushed to the left side, which was also involved to a lesser degree. His throat was almost completely blocked.

At 4 P.M., 1 cc. of Electrargol was injected into the anterior pillar on each side. At 6 P.M. his temperature was 101.4° F. Pain decreased during the night and he slept for the first time since the onset, three days before. He ate a semi-fluid breakfast next morning, and his temperature was 100.4°. He spent the day free of pain, and next morning his temperature was 98°, he ate as usual, and stated that he felt perfectly well. He was kept in the hospital one more day, and then discharged. There has been no recurrence in this case after 10 years.

Case 2: Mr. J. H., onset 10 days ago; he had tried everything available at home, and was getting worse. Pain was very severe, with complete dysphagia for 4 days; glands of the neck swollen; both tonsils and pillars blocking the throat; uvula edematous; very miserable and discouraged; temperature, 102.4° F.

Electrargol, 1 cc., was injected on both sides, and next morning his temperature was 100.4° F. and the swelling and pain persisted. A second injection of 1 cc. was given on the left side, which was the worse. Pain subsided during the night; he began to eat; his temperature was normal on the third day, and he was discharged. There has been no recurrence after 4 years.

This case required two treatments, because, after 10 days, it was on the borderline, but it regressed without suppuration. Compare it with the following:

Case 3: The onset was 36 hours before I saw the patient, with a chill; much pain and dysphagia; swelling, mostly on the left side, the pillar and tonsil filling the throat; edema of the uvula; temperature 103° F.

At 10 A.M., on admission, he was given an injection of 1 cc. of Electrargol. At 8 P.M. his temperature was still 103°, but he felt better. He slept better during the night, and next morning his temperature was 100.3°, he ate breakfast, felt well, and insisted on being discharged, so he was sent home under observation and, 48 hours after the injection, was considered cured. There has been no recurrence after 4 years.

Case 4: Mr. G. T. had a tonsillectomy a few years before I saw him, but his throat was still sore and almost every day he felt dysphagia, stiffness of the neck muscles, and frequent muscular pains in his limbs. At examination I found both pillars red and stumps of tonsils on both sides, with the submaxillary glands slightly enlarged.

Electrargol, 1 cc., was injected in both anterior pillars, and was also massaged into all the sinuses and crypts with an applicator. He has never had any sore throat since the treatment, in September, 1937.

Case 5: Mr. R. B. had a badly decayed lower wisdom tooth. Two weeks before I saw him, he began to feel intense pain in his jaw; enormous swelling developed; the sublingual region was edematous, pushing the tongue toward the roof of the mouth; the tonsils and all corresponding tissues filled the throat; there was incessant salivation and trismus; alimentation was impossible; the general condition was serious, and the patient discouraged; all the swelling was bony-hard; periostitis, together with the throat condition, giving intense pain. His temperature was 100.3° F., with chills; pulse, 110. Large irrigations and sedatives did not seem to produce much effect.

On the second morning after admission, and with great difficulty, I succeeded in injecting 1 cc. of Electrargol where seemingly the edema was most pronounced. The same evening his temperature went up to 102°, but next morning he expectorated pus and blood and was much relieved. His temperature was normal on the third morning after the injection, and remained so. The tooth was extracted a week later, under ether anesthesia.

Conclusions

These facts, and many others not reported here, induce me to conclude that:

1. In peritonsillar abscess, Electrargol, by local injection, is superior to any other treatment known today, including the sulfonamides. It is without danger and gives immediate results.

2. Applied in conjunction with proper cleaning of the crypts, it is successful in most of the socalled lacunar or catarrhal cases.

3. In socalled chronic tonsillitis, the patient can continue his work without the loss of more than one day.

4. Late results are very satisfactory. No recurrences have been reported after several years.

A New Patellar Reflexometer

For Quantitative Measurement of the Knee-jerk

By

FREDERIC DAMRAU, M.D., and MILTON A. LESSER, B.S., New York, N. Y.

The knee jerk is one of the most important diagnostic reflexes, but hitherto the only estimate of its force has depended on the observation and judgment of the examiner. With Dr. Damrau's instrument, the physician can make an accurate, quantitative record of this valuable sign.

NEUROLOGISTS have accepted the amplitude of the knee-jerk as a sensitive indicator of the relative state of irritability of the nervous system as a whole. Physiologists concur in this view.

Thus Howell, in his "Textbook of Physiology," when writing of studies on the knee-jerks, noted:

> "The results are most interesting, in that they indicate very clearly that the irritability of the spinal cord varies with almost every marked change in mental activity. During sleep the jerk disappears and in mental conditions of a restful character its extent is relatively small. In conditions of mental excitement or irritation, on the contrary, the jerk becomes markedly increased."

Recently, in order to study the amplitude of the knee-jerk with precision, we found it necessary to invent an original apparatus, since no instrument of the requisite accuracy was obtainable. This instrument (see Fig. 1) we have called the *patellar reflexometer,* and it consists of a perpendicular lever, the long arm being five times as long as the short arm. On the long arm is a movable attachment which can be adjusted to the ankle. The short arm has an attachment which is connected to a movable slide, which moves along a measured scale. The angular displacement of the angle formed by the short arm and the attachment to the slide can be computed from the amount of displacement of the slide. This instrument was designed for our requirements by Milton Jones.

The reflex is determined by the amount of angular displacement and is measured in terms of centimeters. The movable slide remains at the point to which it has been displaced after the lever falls back. In our work, the knee-jerks are taken with the patient sitting at the edge of a table, the legs hanging over in a state of relaxation. We prefer not to use Jendrassik's maneuver for quantitative measurements, as it introduces a variable.

This patellar reflexometer has many clinical uses where precise measurements of nervous irritability are required. Thus, in cases where the nervous condition of the patient is an important factor in surgical prognosis, as in operations for toxic goiter, this instrument may prove a valuable aid in determining the most favorable time to operate.

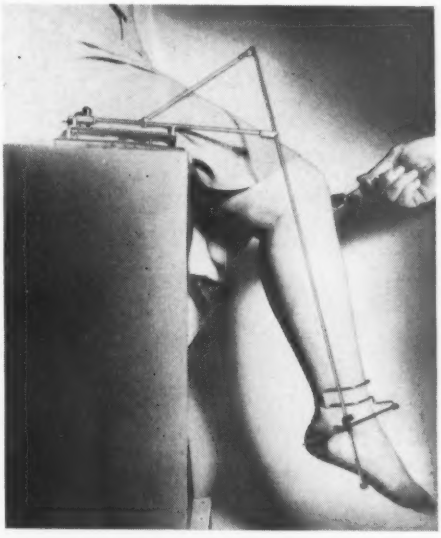


Fig. 1: Clinical application of Damrau's patellar reflexometer for quantitative measurement of the knee-jerks.

Since the extent of the knee-jerk is so sensitive as an indicator of the relative state of nervous excitability, we have found that the patellar reflexometer offers a reliable index to the therapeutic efficiency of bromides and other sedatives. Accurate data relative to both degree and duration of sedative action are obtainable. The instrument is also readily applicable to studies of the effects of stimulants and intoxicants (such as coffee, tea, alcohol, tobacco, etc.) on the nervous system.

In clinical studies, and also those on the effects of foods and drugs on the excitability of the nervous system, it is necessary to take into consideration the normal diurnal variations in the amplitude of the knee-jerk. Hence the report should be furnished in the form of a daily curve, rather than of a single observation.

247 Park Avenue.

Notes from the American College of Physicians*

Part I

Reported by George B. Lake, M.D.,
Waukegan, Ill.

THE twenty-sixth annual session of the American College of Physicians was held in the Municipal Auditorium at St. Paul, Minn., April 20 to 24, inclusive. The meeting place was adequate; the weather was warm and pleasant; and the attendance was about 1,500. There were no scientific exhibits. The technical or commercial exhibits numbered 62, including 11 of medical book publishers; 11 of instruments, apparatus, and furniture; 7 of foods and toilet articles; and 5 of miscellaneous services.

The annual smoker and social get-together occurred on Monday night; on Tuesday night the Ramsey County Medical Society entertained the visitors with a program of music, singing, and dancing; on Wednesday night the annual Convocation of the College was held, followed by the President's Reception and Dance; and on Thursday evening the annual banquet was eaten, accompanied by well chosen remarks of the toastmaster, Dr. John A. Lepak, of Minneapolis, and an address, "Medicine and the Public," by Dr. William A. O'Brien, director of graduate medical education, University of Minnesota.

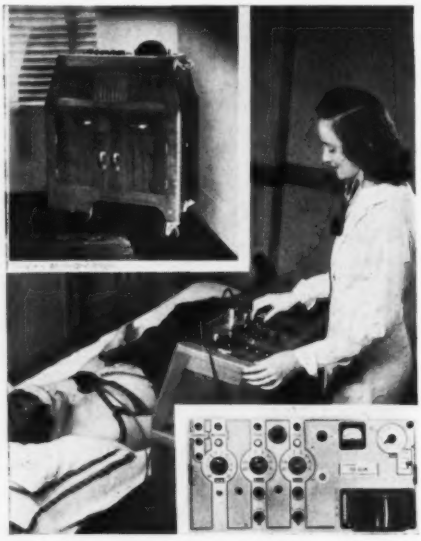
The stately and impressive ceremonies of the Convocation, with the president, Dr. Roger I. Lee, of Boston, in the chair, included the formal entrance processional, presentation of newly-elected fellows (15 of them), and their recital of the pledge in concert, conducted by Dr. George Morris Piersol, Secretary-General; the President's address; the presentation of the John Phillips Memorial Medal to Drs. John R. Paul and James D. Trask, of Yale University, for their research work on infantile paralysis; and the Convocation address, by Dr. William deB. MacNider, Kenan Research Professor of Pharmacology, North Carolina School of Medicine.

Courtesy Am. Hosp. Sup., Co.
Fig. 1. Sander's Vasocillator in use.

At the business meeting, on Thursday afternoon, the new president, Dr. James E. Paullin, of Atlanta, Ga., was inducted into office, and Dr. Ernest E. Irons, of Chicago, was chosen as president-elect.

Commercial Exhibit

The commercial exhibit was rather small, but was well arranged and well attended.



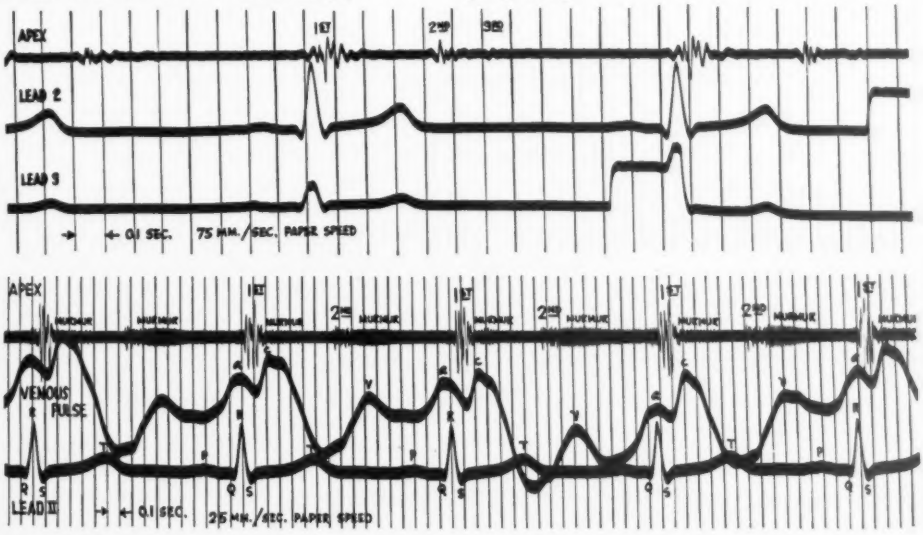
Courtesy Sanborn Co.
Fig. 2: The Sanborn Tri-Beam Stetho-Cardiette. In the center the instrument is shown in use; left upper insert, the complete cabinet; right lower insert, the control panel.

The Cambridge Instrument Co. showed their new research model portable *electrocardiograph-stethograph;* the American Hospital Supply Corp., an improved Sander's *Vasocillator* (see Fig. 1), for the treatment of cardiovascular diseases; the Cameron Surgical Specialty Co., new spark-gap and tube *electro-surgical units* of various sizes; Warren E. Collins, Inc., a new duplex respirator ("iron lung"), in which two children can be treated at the same time; and the Sanborn Co., a new tri-beam *Stetho-Cardiette* (see Fig. 2) which permits the simultaneous registration of a phonocardiogram, two electrocardiogram leads, or two sphygmograms, or one of each, and electrical auscultation, which can be amplified if desired (see Fig. 3). This is not an instrument for the general practitioner, but for institutions for research in cardiology; however, the family doctor should

*The second installment of this two-part article will appear in an early issue.

know what he can expect when he needs to refer a difficult heart case for further study.†

Civil aeronautics gave it a big boost and it is now going strong.



Courtesy Sanborn Co.

Fig. 3. Tracings with the Stetho Cardiette. The upper record shows (from above down) a tracing of normal heart sounds; venous pulse; electrocardiogram. The lower record shows the same tracings from a patient with heart murmurs.

Among the pharmaceuticals, every booth was showing products that were of great interest to every physician, but only a few of them were being shown for the first time, so far as I know. These were:

A preparation of *animo acids for parenteral administration* in febrile diseases, hypermetabolic states (such as hyperthyroidism), acute infections of the liver, hypoproteinemia (from inanition, carcinoma, etc.), and conditions where low-protein diets are indicated; also in tuberculosis of the bowel and chronic ulcerative colitis. This was shown by Frederick Stearns and Co.

A synthetic substance having an antihemorrhagic action identical with that of vitamin K, but quantitatively much more active, was shown by Hoffmann-LaRoche, and is known as *Synkavite.*

Lederle Laboratories showed a blood typing serum made from rabbits, for use in medico-legal identification of human blood, which I believe was new.

Perhaps not quite new, but certainly not yet widely known, were an *orally-effective corpus luteum* preparation, shown bv the Schering Corporation and known *Pranone,* and a *conjugated estrogen, Premarin* (probably somewhat similar to stilbestrol), offered by Ayerst, for administration by mouth.

Here follow abstracts of a number of the papers read at the various sessions.

AVIATION MEDICINE

By Louis H. Bauer, M.D., F.A.C.P., Hempstead, New York. Consultant in Aviation Med. and Cardiology, Civil Aeronautics Administration.

Aviation medicine embraces several sciences: otolaryngology and rhinology; psychiatry; physiology; etc., and was born during World War 1.

†See abstract of talk by Dr. Lundy, on page 209 in this issue.

A pilot traveling at speeds of from 300 to 500 miles an hour, at altitudes of from 30,000 to 40,000 feet, is exposed to shocking, and often sudden, changes in his environment, such as glare, changes of equilibrium, and temperatures as low as 67 degrees below zero, Fahrenheit, so he must be given a *rigid* physical examination and a *careful history* must be taken, especially as regards cardiovascular diseases (personal and familial) and nervous disorders (inability to relax, psychic instability, reaction to stress and strain since childhood, etc.), as well as regarding organic lesions. A "personality test" is given by the psychologists or psychiatrists.

The *eyes* must receive special attention. The applicant must have good *peripheral* (as well as central) *vision, without glasses;* he must have good *binocular* vision (to judge distances); his *ocular muscle balance* must be perfect (rule out *phorias!*); and his *accommodative power* and *color vision* must be normal.

In studying the *ear, nose,* and *throat,* one must look especially for *obstructions to breathing* or to the *eustachian tubes;* the *hearing* must be good (important in using the radio); and there must be no condition liable to cause *toxicosis.*

Remember that the chief factor in *equilibrium* is *vision,* though the *labyrinth* may cause *deceptive sensations,* which the pilot must *learn to disregard.*

Air contains 79 percent of nitrogen and 21 percent of oxygen, and when rapid reductions of pressure occur the release of nitrogen in the nervous system may cause *caisson disease.* This is apt to occur when a pilot reaches a height of 25,000 or 30,000 feet, so when such flights are to be made, the nitrogen should be washed out of the blood by inhaling pure oxygen, *when this is possible.* Remember, also, that at an altitude of 50,000 feet, the *gas in the intestines expands 15 times!*

When there is a sudden change in the direction of centrifugal force, the solid tissues will not move, but the *fluids will*. When a bomber is diving at 500 miles an hour, and suddenly *pulls out of the dive*, serious *cerebral anemia* may occur, unless the pilot *yells at the top of his voice*, to keep some blood in his head. On the other hand, if a pilot climbs fast and *then dives*, the reverse effect occurs and *cerebral hemorrhages* may result.

To illustrate some of the emergencies that a pilot may meet at high altitudes, one man had an obstruction in his oxygen line, and presently he noticed that the sun was dim and *in the wrong place*. When he got the line clear, he found that the sun was shining brightly, and that he was *flying upside down*. Another pilot, flying where the temperature was 60 degrees below zero, got his goggles smeared with oil, so that he had to take them off in order to see where he was going, and *his eyelids froze*. Fortunately the flight surgeon was able to save them, when he landed.

PHYSICAL DIAGNOSIS

By G. Gill Richards, M.D., F.A.C.P., Salt Lake City, Utah. Visiting Phys., Latter-Day Saints Hospital.

God gave us our physical senses and our brains long before we evolved tools, and the latter cannot take the place of the former in studying sick people. By correlating the patient's history and physical findings with our knowledge of physiology and pathology, we can make diagnoses without tools, by virtue of long and continued practice and the experience that comes with it. We need the tools for doing the best work, but we *must not neglect* the thorough and intelligent use of all our trained senses.

Incomplete and mistaken diagnoses frequently result from lack of knowledge of the *normal* chest and abdomen, and of the relation of the internal organs to the parietes. With this knowledge, a careful study of the patient, using a wax pencil to outline the position of the underlying organs on the skin, is often very helpful.

Thorough and painstaking inspection and palpation should always precede percussion and auscultation. We should be able to discover pathologic conditions in the lungs, heart, and abdomen by *gentle* palpation, percussion, and auscultation, without having recourse to the x-rays.

Those who make the poorest showing as general diagnosticians are the ones who have taken up a specialty with too little experience as general clinicians. The best background for any specialist would be two or three years in country practice, as a prophylactic against *dementalization by mechanical gadgets*.

HEAD INJURIES

By Ernest M. Hammer, M.D., St. Paul, Minn.

The best treatment to relieve "wet brain" after a head injury, if the patient is *not* in shock, draining from the ear or nose, or showing symptoms of toxic dehydration, is *spinal drainage*, performed *as often as necessary* and always *controlled* by a spinal manometer, reducing the pressure to *slightly below normal*.

Traumatic Psychoses

The commonest psychic symptoms following a head injury are *unconsciousness and delirium*, followed by *retrograde amnesia* and *chronic depression*. Confabulation and Korsakoff's syndrome are relatively rare, and the latter is not so marked as it is in alcoholic psychoses and arteriosclerosis.

Prognosis is difficult, but the length of the period of unconsciousness is a fairly good index of the severity of the injury, in most cases, but not in all. Children who have a long period of delirium, but not Korsakoff's syndrome, may do well, but a quantitative diminution of mental power is more common.

Delayed intracranial hemorrhage may follow what appears to be a rather mild head injury (the patient is dazed, but not unconscious), but its mechanism may be open to question. It may be intracerebral, subdural, or subarachnoid. We must consider the *age* of the patient (look for arteriosclerosis and hypertension in the older ones) and *individualize* our studies. A blow on the *front* or *back* of the head is most liable to cause intracerebral hemorrhage. We must consider the *location* and *direction* of the blow.

The complaints of these patients may vary from no symptoms at all (rare) to constant headache, dizziness, malaise, prostration, and emotional changes. X-ray studies and encephalograms are of no use in these cases. If *apoplexy* occurs, it should be treated on the usual principles.

If *localization* of injuries of the brain or cord is called for, *look up the technic* in a good textbook and *make spinal fluid studies*.

POPLITEAL EMBOLISM

By Joseph C. Doane, M.D., F.A.C.P., Philadelphia, Pa., Prof. of Medicine, Temple Univ. School of Med.

Thrombosis of the popliteal artery is a rather common vascular accident, but embolism is more so. Arteriosclerotic closure of the artery proceeds *slowly* and does not cause such extensive gangrene as that following embolism, which has a poor prognosis in patients past the age of 50 years, because an embolus gives rise to *sharp vascular spasms*, which cause much damage.

We must diagnose between embolism and thrombosis *as early as possible* (within from 4 to 8 hours, since a clot forms *both ways* within that time), so that *embolectomy* can be performed, in suitable cases. Remember that *cardiovascular disease* is common in embolism, and vice versa.

The *basic symptoms* of embolism are: *Pain* (which may not appear at once, but later); *paresthesias* (numbness, tingling); *coldness* of the leg and foot; and *distended, pulsating vessels* in the leg.

Bear constantly in mind that embolism is an *acute emergency*, the same as a perforated appendix or peptic ulcer, and must be studied and treated at once!

HIGH FLUID INTAKE IN EDEMA

By F. R. Schemm, M.D., F.A.C.P., Great Falls, Mont.

Withering urged his patients with dropsy to drink *plenty of water*, which is a good diuretic. The idea of restricting fluids in these cases has developed within the past 50 years.

Edema is *extra brine*, due to an excess of *salt* (not water, *per se*) in the *tissues*, and edematous patients may be badly *dehydrated*, so that they need as much as 6,000 cc. of *plain* water daily. Proper control of the chlorides will prevent the diversion of water to the cells.

The management of these cases calls for a *neutral diet*—not low-salt or acid-ash, but a combination—with 4,000 cc. of water daily and moderate doses of dilute hydrochloric acid, by mouth. Many cases of massive anasarca and gross heart disease have been cleared of edema on this regime, some of them losing from 20 to 30 pounds of fluid in 5 or 6 days.

(*to be continued*)

Simplified Sinus Treatment

Part III*

By

RUSSELL A. WINTERS, M.D., Chicago, Illinois

THE sphenoidal sinus and maxillary sinus are similar in construction to a coffee pot. Their openings are near the top so that the sinus fills up and does not empty unless they overflow or are "tipped over" by lying down.

The Sphenoidal Sinus

The sphenoidal sinus is located behind the posterior ethmoidal air cells. It is intimately connected with vital structures, since the optic chiasm (2nd cranial nerve) lies above its anterior margin; the sella turcica of the sphenoidal bone, which embraces the pituitary gland, is its top covering; and the third ventricle of the brain rests on the upper portion of its rear wall. Thus an acute congestion or chronic inflammation can cause pathologic changes in any of these structures.

Acute Symptoms: Mental torpor, "dumb headache," "wry-neck," "cold in the neck," "migraine" headache at the base of the skull, "morning catarrh," or post-nasal drip.

Chronic Symptoms: Ozena, nocturnal attacks of asthma, pharyngitis due to dripping into the throat, bronchitis, "clearing of the throat," neuritis or arthritis in the neck or shoulders, morning "hawking" to clear throat, pronounced point of soreness above the upper angle of the scapula.

Points of Tenderness: May be over the posterior fontanel in the scalp, the occipital ridge near the midline, soreness over the lateral processes of the atlas or axis vertebrae, tenderness at the upper angle of the scapula, tenderness over the "tip of the shoulder."

Treatment: Gently pass the straight catheter along the nasal septum, keeping it in line with the upper part of the ear attachment. If the point is angled properly a sensitive area is encountered at about 3¼ inches beyond the external nose opening. Gently press at this point and instil 0.5 cc. of the solution.

The Maxillary Sinus

The maxillary sinus is found in the bony portion of the cheek and is at the lower portion of the bony orbit. It is also known as the "antrum of Highmore." It is triangular in shape and the apex or lower end lies below the level of the nasal floor. The canine or the first bicuspid tooth root may perforate this sinus in its development.

Due to its accessibility, many men in this field adore cutting a window into it to promote drainage, without first trying a more conservative procedure.

The opening into the maxillary sinus is near the anterior ethmoidal air cells.

Acute Symptoms: Dull pain in the cheek-bone, swelling of the cheek, trifacial neuralgia, Bell's palsey.

Chronic Symptoms: Puffiness below the eyes, alternating occlusion to breathing in the nasal passages, enlarged turbinates, and frequent sinusitis flare-ups during rapid weather changes.

Mucus Symptoms: Running nose; alternating occlusion to the nasal passages that is most evident at night, when the uppermost side occludes and the lower is open. The occlusion reverses sides when the patient lies on the opposite side.

Treatment: Bend the distal ½ inch of the catheter at a right angle. Pass the catheter into the nose so that the tip is passed in an arc equivalent to the bend and is kept in line with the lower eyelid. Gently push on the catheter after resistance is met and instil 0.5 cc. of solution.

The Naso-Lacrimal Duct

The naso-lacrimal duct passes downward and inward from the lacrimal sac, which lies behind the middle angle of the eyelids, to open beneath the inferior turbinate. This outlet is protected by an inefficient valve. Tears that are continually secreted by the tear glands, which lie beneath the eyelids, reach the nasal cavity by means of these ducts and passages, hence the need of blowing the nose after crying, in order to remove the tears that run into the nose.

Acute Symptoms: Watering of the eyes, "cold in the eyes," swelling of the upper eyelid, acute coryza, sneezing, hay-fever.

Chronic Symptoms: Chronic hay-fever, watering eyes, swollen upper eyelids, blurred vision as in looking through a film.

Mucus Symptoms: Sneezing, followed by a running nose.

Local Findings: Engorgement of the inferior turbinate or congestion. Tears roll down the cheeks.

Treatment: Treat the sinuses first. Use a 25-gage, 1½ inch needle, on an adapter, and inject 0.5 to 1 cc. of equal parts of Quinocaine and Neo-Plasmoid, to which has been added 2 minims Adrenalin Chloride (epinephrin). The needle point is passed into the congested mucosa, on the under surface of the inferior turbinate, until it rests on the periosteum, and the injection is made. Repeat once or twice weekly.

Quinocaine dropped into the eyes aids in opening the naso-lacrimal duct.

Insulin, 3 units per hypodermic injection, morning and night, aids in offsetting early catarrhal conditions.

Dr. L. P. Ramsdell, of LaPorte, Indiana, instituted the use of a semi-flexible catheter in treating sinus cases, in order to lessen the danger of injury to the delicate nasal mucosa, with subsequent cicatricial formation and danger of an atrophic rhinitis.

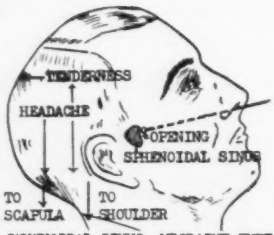
Quinocaine, in catarrhal cases, meets the needs of a proper medicament by having an acid pH to restore the nasal mucosa to a mildly acid condition; contains quinine, which has proved its merit in catarrhal cases; and has an aqueous base to facilitate its efficiency, since oil bases coat the nasal mucosa, inhibiting the action of the ciliated nasal or schneiderian membrane.

In the eye it acts as an astringent, germicidal agent that alleviates the congestion of the naso-lacrimal duct and flushes the same portal utilized by the tears.

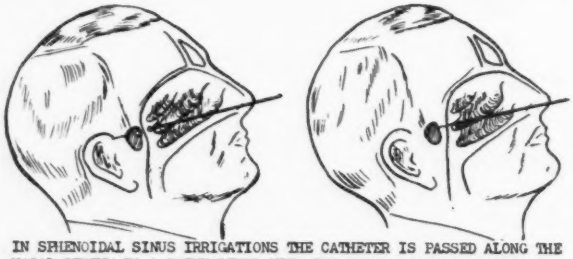
When injected into the tissues, it is a prolonged, aqueous local anesthetic, whose action persists from 3 to 7 days.

Sulfathiazole Sodium is indicated in mixed in-

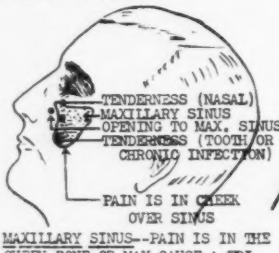
*This is the third and final installment of a three-part series.



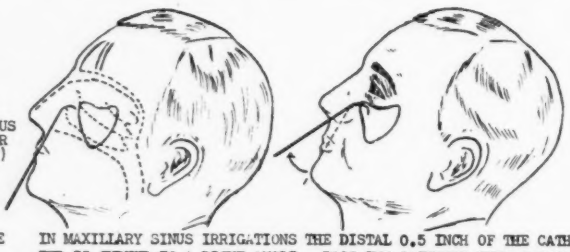
SPHENOIDAL SINUS--MIGRAINE TYPE OF HEADACHE, STIFF NECK, PAIN IN SHOULDER OR UPPER ANGLE OF SCAPULA. TENDERNESS AND MILD OEDEMA PALPABLE OVER THE POSTERIOR FONTONNEL, SIDES OF ATLAS VERTEBRA, TIP OF SHOULDER, OR ABOVE UPPER ANGLE OF SCAPULA.



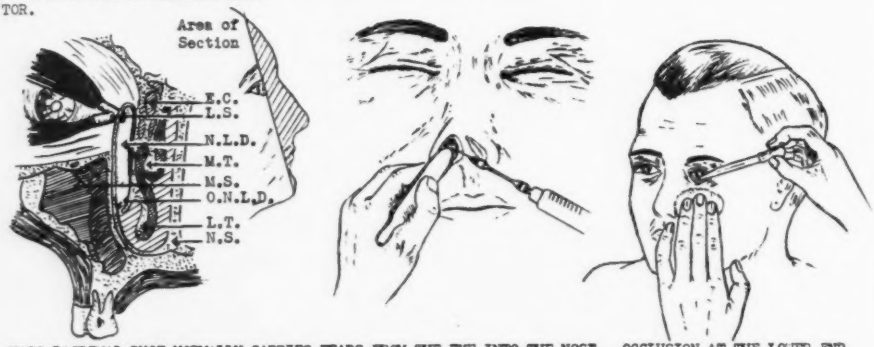
IN SPHENOIDAL SINUS IRRIGATIONS THE CATHETER IS PASSED ALONG THE NASAL SEPTUM TO A POINT LEVEL WITH THE UPPER PORTION OF THE ATTACHMENT OF THE EAR TO THE HEAD. A VERY TENDER SPOT INDICATES THE OPENING TO THE SINUS AND USUALLY A SLIGHT ADDITIONAL PRESSURE PERMITS AN ENTRANCE TO THE SINUS. INSTIL 0.5 CC. OF QUINOCAINE, OR OF THE SULFATHIAZOLE SOLUTION.



MAXILLARY SINUS--PAIN IS IN THE CHEEK-BONE OR MAY CAUSE A TRIFACIAL NEURALGIA. OEDEMA AND TENDERNESS IS PALPABLE OVER THE MAXILLA NEAR THE NOSE OR MAY BE AT THE LOWER END OF THE SINUS IF A TOOTH IS THE AGGRAVATING FACTOR.



IN MAXILLARY SINUS IRRIGATIONS THE DISTAL 0.5 INCH OF THE CATHETER IS CURVED TO A RIGHT ANGLE. PASS THE CATHETER INTO THE NOSE SO THAT THE TIP MOVES IN AN ARC, KEEPING THE TIP IN LINE WITH THE MIDDLE OF THE LOWER EYELID AND THE CURVE AWAY FROM THE NASAL SEPTUM. INSTIL 0.5 CC. OF QUINOCAINE OR OF THE SULFATHIAZOLE SOLUTION.



NASO-LACRIMAL DUCT NORMALLY CARRIES TEARS FROM THE EYE INTO THE NOSE. OCCLUSION AT THE LOWER END RESULTS IN HAY-FEVER, WATERING EYES, ITCHING OF THE EYES, ETC. A BARD-PARKER KNIFE HANDLE MAKES A GOOD NASAL SPECULUM FOR INJECTIONS. USING A 25 GAUGE, 1.5 INCH NEEDLE INJECT 1 CC. OF NEO-PLASMOID AND QUINOCAINE EQUAL PARTS INTO THE ENGORGED INFERIOR TURBINATE. THE NEEDLE POINT SHOULD REST ON THE PERIOSTEUM AND INJECTIONS SHOULD BE MADE ALONG ITS MARGIN IF THE ENGORGEMENT IS EXTENSIVE. THEN DROP QUINOCAINE INTO THE EYE TO WASH THE DUCT FROM ABOVE, SINCE QUININE IS GERMICIDAL AND ASTRINGENT. THIS WASHING ALSO ALLEVIATES EARLY HEAD COLDS IN MANY CASES. E.C.--ETHMOIDAL CELL; L.S.--LACRIMAL SAC; N.L.D.--NASO-LACRIMAL DUCT; M.T.--MIDDLE TURBINATE; M.S.--MAXILLARY SINUS; O.N.L.D.--OPENING NASO-LACRIMAL DUCT; L.T.--LOWER TURBINATE; N.S.--NASAL SEPTUM.

fections, although it is relatively ineffective on gram-positive and diphtheroid type of cocci.

Neo-Plasmoid, when injected into tissues, is a safe, mildly sclerosing solution and in the nose produces the desired shrinking of hypertrophied or engorged turbinates, without injury to the ciliated membrane, which follows the use of the cautery, silver nitrate, zinc ionization, etc.

All sinuses are treated at each visit. Treatments are given daily, twice weekly, or once weekly, varying with the acuteness of the condition.

5 North Wabash Ave.

A Living for the Doctor

The Business of Medicine and the Art of Living

How to Make a Wrong Diagnosis

THE number-one essential, if you wish to make wrong diagnoses, is to follow scrupulously every rule laid down by men famed for their diagnostic ability.

A favorite rule has always been that very common conditions should be considered first, and given the benefit of the doubt because they appeared numerically so much more often. As a result of this general statement, one finds common diagnoses made very frequently, and a limitation of most physicians' minds to a comparatively few choices. If abdominal pain is not caused by appendicitis, cholecystitis, or ulcer, the natural tendency is to class the patient as a neurotic and move cheerfully on to something that one can "get one's teeth into."

Another rule has been this: Always try to make all signs and symptoms fit one diagnosis; never make several diagnoses if it can be avoided. A practical example of the working out of this dogma follows:

A man of 34 years complained of aching pain in the frontal areas, which was increased by bending forward and by straining. The obvious first impression was frontal sinusitis; and, sure enough, he *did* have a mild sinus infection. Several Proetz displacement-suction treatments relieved him for a time, and then seemed to lose their effect. The course seemed atypical but a mind-satisfying diagnosis had been made. Unfortunately for the one diagnosis theory, a neurologist reported that the patient had a brain tumor *and* sinusitis.

Diagnosis by epigram was formerly very common and is still encountered today. "A woman who is fair, fat, and forty may be presumed to have gallbladder disease." "Fever that lasts more than two weeks is probably due to typhoid" (a professor in a Grade-A school repeated this clinical aphorism less than 10 years ago, and naively added that, in one case, the laboratory had not helped, as both the Widal test and a blood culture were negative). "Loss of weight and strength may be due to hyperthyroidism, diabetes, anemia, or a malignant growth." "Persistence of fever in pneumonia indicates empyema formation."

Not that such easily-remembered tid-bits do not quickly direct the mind to conditions that should be considered; on the contrary, they often are of great value. The error lies in considering that one has "made a diagnosis" if one goes only by these rough rule-of-thumb suggestions.

R. L. G.

Our Barbaric Surgery

FOR hundreds of years, surgeons have said confidently, "Modern surgery has reached its fullest possible extension and there will be no more great advances." They are still proclaiming the greatness of their own methods and technics.

Yet, on looking over the operative schedule of a busy clinic, what perfect procedures can we find? Four thyroidectomies are scheduled for this morning. This operation is admittedly directed at the wrong organ, since simple hyperthyroidism is not due directly to a pathologic disturbance in the thyroid gland itself, but to the patient's constitution; yet it is the only way we know, at present, for breaking up the circle of over-stimulation of the sympathetic nervous system.

Two patients are listed as having "chronic appendicitis." What *is* chronic appendicitis? Quite often, the pathologist can find nothing abnormal about the appendix after it is removed. A number of patients who undergo this operation are definitely benefited; others are not. Why?

One patient is to have half of his stomach removed because of an intractable gastric ulcer, which has not been cured by a preceding excision and gastro-enterostomy. Why? Is not the trouble located elsewhere in the body—in the sympathetic nervous system or in a focus of infection? Would it not be better, if possible, to get this man away from his nagging wife and from the constant nervous strain of his business?

The huge carbuncle on the back of that old man will be slashed open widely. Next year, we may be using an immunotransfusion and diathermy as the treatment.

The otolaryngologists plan to gouge into five sinuses, scraping out the inflamed mucous membrane. Why do turbinates swell, thus blocking off the ostia of the sinus and preventing free drainage? The physician who could control this process would be mankind's greatest benefactor.

And so on down the line, a critical investigation reveals that we are deceiving ourselves, with shiny, ingenious instruments, deft technic, and swanky operating rooms, into the belief that our surgery is *now* scientific and intelligent. It is easy to prophesy that, barring a cessation of study into the causes of disease, more than half of these operations will be forgotten fifty years hence.

R. L. G.

★ Notes and Abstracts ★

The Problem of the Post-Dated Check

"I SIMPLY must have immediate settlement of your overdue account," Doctor Medico wrote.

"Am enclosing check on the Brick Bank, dated the 5th of next month, to cover my account in full," Thomas Elder replied.

"Cannot accept post-dated check unless I get guarantee Brick Bank will honor same when due," Doctor Medico wired back.

"We agree that Thomas Elder's check on this bank, in your favor and dated 5th proximo, will be honored on presentation," the Bank wired the doctor.

A week later Doctor Medico placed the foregoing correspondence (and check) on his attorney's desk—and the check was stamped "no funds."

"Want to sue Elder?" the attorney asked.

"No! I'm wasting no money on him. Sue the bank on their guarantee," Doctor Medico ordered.

But, when the case came to trial, the bank's attorney had a plausible defense.

"The bank's letter was in reality a guarantee to pay the debt of a third party (a certain Mr. Thomas Elder), which banks are strictly forbidden to do," he argued.

"We may safely assume, before writing the letter in question, the bank took some security from Elder to protect itself, and the whole transaction is, in effect, a letter of credit, such as banks issue every day," Medico's attorney contended.

"The case of Russell vs. Bank, a North Dakota decision found in 194 N.W. 387, is in your favor," Judge Enright assured him, "and there will be judgment in favor of Doctor Medico—with costs."

M. L. H.

[Be sure to let us know (a postcard will do) if you want this series of articles continued. This is the last, unless we hear from a number of you. —ED.]

✦

Advice to Recent Graduates

HERE are a few aphorisms that the intern and recent graduate may well heed (and the older man may brush up on):

1.—Do not tell a professional mistake on yourself. Someone else will be glad to do this for you.

2.—Do not select a specialty too soon. You will find, on experience, that a certain type of case actually gravitates toward you, and that, in the handling of these cases, you are particularly successful. Specialize in this field—*after* you have acquired the means to pay for the necessary training.

3.—Do not select a specialty because you admire one of your professors who is particularly good at it. You may not be so good yourself. Pick your specialty according to *your own* talents.

4.—Recognize a *paying* charity patient. Many times you can afford to take care of this type of charity patient (they will sing your praises around town).

5.—Steer clear of a physician who publicizes some professional colleague's mistake. He will be glad to do the same thing for you.

6.—Select a nurse with a strong back rather than a strong mind. You are supposed to do the thinking. A nurse should be interested in the *patient*—not the disease, that is your business. (Any experienced nurse may save your reputation by careful observation. It is a mark of egoism to believe that only the medically trained individual can note occurrences and think.—ED.)

7.—Do not be afraid to come down to your patient's level when talking to him.

8.—Too much explanation is often interpreted as indecision, which is a crime unforgiveable in a doctor.

9.—If you feel the urge to celebrate, do it out of town—and *take a train.* — *Hahneman. Month.*, June, 1940.

★ Books ★

Anthology of Short Poems

Cheyney & Trent

MUSIC IN MINIATURE, An Anthology of Short Forms. *Edited by the late* RALPH CHEYNEY, Litt. D., *and* LUCIA TRENT. *San Antonio, Tex.: Lucia Trent, 202 Madison St., 1942. Price, $2.00.*

IN THIS interesting volume, the editors (both well known poets) have gathered more than 300 brief poems (none more than 10 lines long) by about 200 writers, many of whom are poets of standing, with short descriptions of 24 of the small forms included, which should be helpful to verse writers.

This is a good book to pick up for a few spare minutes, or to place on the table in the waiting room.

✦

The Spiritual Road

THE ROAD I KNOW. *By* STEWART EDWARD WHITE. *New York: E. P. Dutton & Co., Inc. 1942. Price, $2.50.*

THOSE who have read "The Unobstructed Universe" (reviewed in these pages in September, 1941, page 223), will want to read this book, to find out how Betty "got that way." Those who have not, should read this one first, to understand the years of training required to make that revelation possible.

Much of the material in this volume was communicated in what is called the trance state, but it is as far beyond ordinary psychism or mediumship, in clarity and practical value, as the music of a great pipe-organ surpasses that of a 25-cent harmonica.

Here are a few samples:

"Old age is when you stop looking at things."

"Asceticism means you are afraid of something."

"Spirituality is just daily life carried on by a self with higher associations."

"The brain is the executive, not the originating, branch of our personal government."

Those who are truly convinced that they are nothing but meat, and that when they die they simply rot, would probably consider this book "bunk." But all who have even a faint glimer of the Basic Verities will find it vastly stimulating and genuinely helpful.

Clinical Medicine Graduate Course

IV Abnormal Breathing

(Summary and Comments)

An Epitome of Recent Literature

By
RALPH L. GORRELL, B.S., M.D., Clarion, Ia.

I. *Deep, slow respirations*
  1. Forceful inspiration, ineffective expiration —*respiratory obstruction.*
    A. Foreign body
    B. Diphtheria
    C. Asthma, bronchial
    D. Emphysema
    E. Pharyngeal abscess
    F. Laryngeal edema
  2. Deep, slow respirations
    A. Acidosis
      a. Diabetic ketosis
      b. Nephritis, uremia (Cheyne-Stokes tendency)
      c. Prostatism
    B. Hyperthyroidism

II. *Shallow, slow respirations*
  1. Alkalosis
    A. Persistent vomiting
      a. High intestinal obstruction
    B. Excessive alkali therapy, especially in peptic ulcers and diatetes.
    C. Hyperpnea

III. *Shallow, fast respirations*
  1. Increased pressure in the pleural cavity due to air, liquid, or solid
    A. Pneumothorax, acute
    B. Pleuritic fluid, empyema, hemothorax
    C. Tumor of the lung or mediastinum
  2. Lesions of lung tissue
    A. Pneumonia, lobar or broncho (especially capillary bronchitis)
    B. Atelectasis (lung collapse), usually secondary to a major operation, bronchopneumonia of children, foreign body, neoplasm of bronchi, aneurysm, laryngeal stricture or laryngotracheobronchitis, pericardial effusion, enlarged heart, mediastinal tumors, pleural effusions, increased intra-abdominal pressure.
      Massive collapse follows paralysis of the respiratory muscles postoperatively or postdiphtheritic, gross bronchial obstruction, or trauma to the chest wall. (Atelectasis, especially if minor, may present no symptoms, and occasionally no gross physical signs.—Davidson).
    C. Pulmonary infarct (lung embolus)
    D. Edema of the lung
      a. Acute paroxysmal, due to heart failure, nephritis, etc.
    E. Tuberculosis.
  3. Diseases of the heart—congestive cardiac failure; coronary lesions, acute or chronic
  4. Diseases of the arteries—arteriosclerosis, hypertension (tendency to Cheyne-Stokes respiration)
  5. Diseases of the blood—anemias
  6. Shock — either peripheral circulatory failure or bleeding
  7. Respiratory paralysis, due to nerve or muscle paralysis; high spinal anesthesia; poliomyelitis
  8. Thoracic pain—pleuritic pain; neuralgia of the intercostals
  9. Abdominal distention
  10. Insulin shock
  11. Myxedema

IV. *Periodic* (deep and slow; deep and rapid)
  1. Cerebral hemorrhage, edema, or tumor (watch out for it after accidents)
  2. Irregular, deep or shallow
    A. Neurosis or hysteria
  3. Paroxysmal
    A. Postencephalitic

Axioms Concerning Dyspnea

1. Dyspnea, in patients over 45, may be caused by coronary artery disease; syphilitic aortitis, with or without valve disease; or a deep-seated aortic aneurysm.

Dyspnea, in patients under 40, may be caused by latent pulmonary disease, especially latent tuberculosis; syphilis of the heart; or pericardial effusion or adherent pericardium. Severe dyspnea may occur during cardiac or acute renal disease or scarlet fever, as a sign of impending acute hydrothorax.

2. If a dyspneic patient presents no definite signs, suspect cardiac or pulmonary disease or anemia.

3. Paroxysmal dyspnea may be caused by: (1) heart disease; (2) chronic nephritis; (3) bronchial asthma; (4) laryngismus stridulus; (5) pertussis; (6) neurotic dyspnea ("panting" often ceases when the patient talks); (7) aneurysm or other intrathoracic tumors; (8) acute pulmonary edema; (9) foreign body; (10) tabetic laryngeal crisis; and (11) possibly (not certainly) enlarged thymus.

Comments

By HORACE M. KORNS, M.D., A.M.
Iowa City, Ia.
Prof. of Medicine, State Univ. of Ia.

The term "dyspnea" has been used above to cover, not only air hunger, or shortness of breath, but all other kinds of respiratory symptoms. I do not think that this is justifiable. A man may be short of breath without being dyspneic, and vice versa, or he may be both. Failure to make this distinction, which is not arbitrary, but fundamental, has caused a lot of confusion. Even Harrison, whose discussion of respiratory symptomatology is probably the best in English, does not seem to appreciate this.

I doubt whether massive atelectasis is caused by respiratory paralysis. It is probably either neurogenic (reflex) or the result of bronchial obstruction.

By definition, "hypernea" means an increase in the respiratory minute-volume, and this is brought about by an increase in the respiratory rate, or depth, or both.

I see no mention of *paroxysmal tachypnea*, which is the analogue of paroxysmal tachycardia.

I do not think that neurotic respiratory symtoms should be placed under the heading of paroxysmal dyspnea.

✦

By CHEVALIER L. JACKSON, M.D., F.A.C.S.
Philadelphia, Pa.
Prof. Clin. Bronchoscopy, Temple Univ.

I have looked over the tabular outline of the causes of dyspnea, and I think it is excellent. I am glad to see the various forms of high obstruction placed first in this outline, because certainly it is especially important that they be recognized and treated without delay.

My only suggestion is that it be clearly indicated that the type of dyspnea (that is, the rate and depth of respiration) is *not a certain differential point*. At certain stages, for example, the dyspnea of high obstruction may be shallow and fast, rather than deep and slow. Additionally, the signs of high obstruction—*indrawing at the suprasternal notch and supraclavicular spaces*—might be mentioned, at least in parenthesis.

✦

By J. C. MEAKINS, M.D., F.R.C.P., F.A.C.P.
Montreal, Can.
Prof. of Medicine McGill Univ. Faculty of Med.

I was much interested in this tabular outline on dyspnea. I can see nothing in particular to criticize about it, except under "III-2-E." Would it not be well to put in brackets, "miliary," after tuberculosis?

I think the thymus, the last word in the last paragraph, could be completely eliminated.

✦

By NATHAN S. DAVIS, M.D., F.A.C.P.
Chicago, Ill.
Asst. Prof of Medicine
Northwestern Univ. Med. School

Under "I-2-A," I prefer the term, "diminished alkali reserve," to the term "acidosis."

Similarly, "II-1" should read, "Diminished acid reserve," instead of "Alkalosis"; "A" and "a" should remain the same; then a "2," "increased alkali reserve," should be added under II, and "B" and "C" should become "A" and "B" under "2."

Under "III-2-A," I believe that *aspiration pneumonia* should be added since this type of peumonia may be due to the aspiration of oils or of vomitus.

Under "III-2-D-a," should it not read "Acute paroxysmal, due to *left* heart failure, nephritis, etc.?"

Under "III-3," I should prefer: "Diseases of the heart—*left* heart failure with pulmonary congestion; *coronary atherosclerosis with stenosis or occulsion of the lumen due to recent or old lesions.*

Under "Axioms, 2," the following should be added to the first paragraph: "Chronic lung disease with emphysema; pneumokoniosis." In the second paragraph: "Dyspnoea, in patients under 40, may be caused by *rheumatic valvular heart disease; neurocirculatory asthenia,* by latent . . . hydrothorax. *It may indicate a spontaneous pneumothorax.*"

SELF-MASTERY

In the mind that has been corrected and purged there is nothing unhealthy, impure, or unsound. Fate can never catch such an one with his life incomplete, like an actor who quits the stage before the play is finished. There will be about him no servility, or boastfulness, or weak dependence, or offishness. Though answerable to none, he will have nothing to conceal.—MARCUS AURELIUS.

✦

LITERARY DIET

A patient who had acquired the library habit during his stay in a Veterans' Hospital wrote back to the librarian, after his discharge, "Please send me my literary diet sheet, as I am beginning to suffer from mental rickets."—CHARLES GRIFFITH, *Medical Director, U. S. Veterans' Administration.*

The Seminar

Our readers are cordially invited to submit fully worked up problems to the Seminar and to take part in the discussions of any or all problems. Discussions should reach this office by the 5th of the month following the appearance of the problem. Send your problems and discussions to The Seminar Dept. care CLINICAL MEDICINE, Waukegan, Ill.

Problem No. 5 (Medical)

Presented by J. A. Simpson, M.D., F.I.C.S., Laredo, Texas

(See CLIN. MED., May, 1942, p. 143)

RECAPITULATION: A man of 68 years, who was gassed in France, in 1918, and before that had arthritis, complained of a severe, dry cough, excited by smoke (especially burned grease), and fairly severe attacks of tachycardia. He said there had been sugar in his urine for a while, about a year ago.

Examination: The only abnormalities found in a careful examination were: moderate overweight; moderate enlargement of the heart (confirmed by x-rays), with a soft, swishing murmur over the sternum when bending forward; slight myocarditis (electrocardiogram); and slight evidence of chronic bronchitis (no tubercle bacilli in his sputum). His blood pressure was 128/85. During an attack of tachycardia, his pulse rate was just twice normal. These attacks were sometimes relieved by vagus nerve pressure and quinidine.

Requirements: State your tentative diagnosis, *with reasons,* and what further studies *you* would have made. Outline the management of this case, *in detail.*

✦

Discussion by L. E. Williams, M.D., Kansas City, Mo.

The history, the physical and laboratory findings of this case, and the therapeutic response to quinidine lead me to suspect that we are dealing with one of three conditions: auricular fibrillation, auricular flutter, or auricular paroxysmal tachycardia.

The fact that coughing attacks are precipitated by smoke, especially of burned grease, is suggestive of an allergy, but this may be due to the chemical irritation of the already chronically inflamed bronchi as a result of war gas. The history of arthritis, the presence of a diseased myocardium, and a murmur which is suggestive of a mitral valve lesion indicate that we may be dealing with "cardiac asthma," but this condition responds better to morphine than to quinidine.

This patient had glycosuria for two months, after which it disappeared. It is not stated whether there was also hyperglycemia or whether any treatment was given for it. Hence we must consider that condition known as *paroxysmal hyperadrenalism,* which is characterized by very pronounced symptoms, resembling those of shock. During the attacks, the systolic blood pressure rises to an exceedingly high level, and glycosuria and hyperglycemia are found. After the attacks, the blood pressure returns to normal and the glycosuria and hyperglycemia disappear. The symptoms and physical findings of this case are not in accord with such a condition.

Auricular fibrillation, auricular flutter, and auricular paroxysmal tachycardia have practically the same etiology, but paroxysmal tachycardia is less frequently accompanied by a diseased myocardium. All three are paroxysmal and respond at times to quinidine. Auricular fibrillation is more or less permanent; there is complete arrythmia, and it usually responds better to digitalis. In this case the rhythm is apparently regular.

It is asserted that, during the attacks, the pulse is twice its normal rate. If the ventricular rate of 148 per minute is only half of the auricular rate, we are probably dealing with a condition of auricular flutter with a two-to-one heart block. Nothing is said, however, of the auricular rate, so we must assume it to be the same as that of the ventricle.

The paroxysmal attacks of dyspnea, accompanied by a pulse of 148, without marked distress, responding to carotid pressure and to quinidine, in a person with a history of rheumatism and the physical findings of a rheumatic heart, are suggestive of *auricular paroxysmal tachycardia.* Of course it could be ventricular, but ventricular paroxysmal tachycardia is rare and is a more serious condition than the symptoms of this case seem to indicate. An electrocardiogram, *made during the attack,* would reveal the nature of the disturbance.

Tentative diagnosis: Chronic bronchitis; chronic pulmonary congestion (the right heart being enlarged); chronic rheumatic myocarditis with an involvement of the mitral valve; and auricular paroxysmal tachycardia.

Treatment is often disappointing, especially from the viewpoint of prevention of attacks. Since numerous drugs are recommended for this condition, none of which can be depended upon to stop or prevent attacks, and quinidine having been found to give the best result in this case, I would certainly continue its use. Quinidine is a treacherous drug and the patient should be watched carefully. A maintenance dose or doses of quinidine should be sought for, to prevent or prolong the intervals between the attacks. If there is anything in the patient's habits that may be a contributing cause, it should be corrected. Worry, over-exertion, constipation, and heart failure should be prevented. Hence, digitalis and bromides may be used with advantage.

✦

Discussion by George B. Lake, M.D., Waukegan, Ill.

The somewhat incomplete history of this case suggests that the chief trouble is *paroxysmal tachycardia,* but I should want Wassermann and dextrose tolerance tests and a more complete and detailed study of the heart sounds and roentgenogram, to rule out or confirm the presence of valvular disease or aneurysm or both, and careful blood studies. I should also want to know how

frequently the attacks of tachycardia occur, how long they last, and what brings them on—exertion, psychic stress, etc. — and whether or not the rhythm is regular during attacks.

The cough may or may not be due to the gassing, 24 years ago, but it might be caused by an aneurysm or other mediastinal tumor pressing, directly or indirectly, on the recurrent laryngeal nerve. The *specific* reaction to the smell of frying meat suggests a *psychic* factor that calls for careful investigation.

On the basis of the facts presented, I should prescribe for this patient a regular and quiet life, especially avoiding *sudden* or *violent* efforts; sharp restriction of the use of tobacco; small, measured doses of alcohol; and a diet, *worked out in detail,* to give him an adequate supply of proteins, minerals, and vitamins, and to reduce his weight about 10 or 15 pounds. I should also apply the suggestions made by Dr. T. R. Harrison in his article abstracted in *Clinical Notes and Abstracts* and *Thumbnail Therapeutics,* in this issue.

Further information might call for definite modifications of this suggested regime.

✦

Discussion by W. B. Palmer, M.D., Furman, Ala.

Each symptom of this patient will be discussed in order to reach a diagnosis.

A normal electrocardiogram is often obtained in the presence of serious cardiac disease. The question to decide is whether or not the impulse which originates the heart beat arises in the sino-auricular node or in other parts of the heart.

In paroxysmal tachycardia (auricular) the ectopic focus sets the pace and transmits a series of regular impulses through the auricles. The wave is normal as it continues through the ventricles, hence the Q-R-S-T waves are normal. Although the impulses sent through the auricles are abnormal, they blend with those of the ventricular complex, producing a regular rhythm, and hence pass unrecognized.

The successful treatment, at times, by stimulation of the vagus nerve, utilizing the carotid sinus and the oculocardiac reflexes, or by giving an emetic, such as ipecac or a hypodermic injection of apomorphine, or drinking cold water, or holding the breath, apparently confirms this diagnosis. A hypodermic injection of 20 mg. of the powerful vagal stimulant, acetyl-B-methylcholine often stops an attack. In this case, quinidine was consistently successful.

After stopping an attack, relatively permanent relief can often be obtained by giving 1½ grains of a high grade of digitalis leaf, thrice daily for from three to five days, and then one dose a day. I treated a case successfully for five years by this method. Three times during that time I stopped the daily dose of digitalis, and the attacks recurred.

Digitalis is a dangerous drug, and so is quinidine. Digitalis is either needed or not, in heart diseases. If a patient needs it (for instance, when compensation is broken), the margin of safety is often narrow between an effective and a toxic dose, hence constant observation of such a patient is necessary. Other diseases of the heart do not often accompany paroxysmal auricular tachycardia.

Information about the relation of the swishing murmur to the systole and diastole is essential for diagnosis, but this was not given, so we are compelled to depend chiefly upon the location of the murmur.

It is often difficult to distinguish between aortic stenosis, mitral stenosis, tricuspid involvement, and a small aortic aneurysm. The murmur of aortic stenosis is often heard over some parts of the sternum. Hypertrophy of the left ventricle is the first result. The whole heart enlarges. At times it seems impossible to detect the murmur of mitral stenosis. When heard, it is at the apex of the heart. This murmur is detected with the patient in the recumbent position, with a slight turn to the left. The bending forward of this patient was, perhaps, equivalent to the left-recumbent position.

Lesions of the tricuspid valves may follow mitral stenosis. If the systolic murmur, and especially the diastolic murmur, is heard better in the midline than at the apex, I suspect that tricuspid stenosis is present. The right side of heart is enlarged.

Perhaps the sole cause of mitral stenosis is a prior attack of acute rheumatic fever, which, like syphilis, allergy, and deficiency states, is protean in its manifestations. There are atypical forms often not detected. On account of the chronicity of its sequellae, some form of arthritis or mitral stenosis, which gives no discomfort, may appear long after an unrecognized beginning.

This patient could have belonged to the acute rheumatic class, although he is not physically of the type that usually develops mitral stenosis. However, there are no arbitrary boundaries in nature.

In mitral or tricuspid stenosis and some other heart lesions, there is often passive congestion of the lungs, which frequently produces cough. Such patients are also susceptible to true bronchitis. The rheumatic diathesis, the passive congestion, plus the trauma and infection—all played their parts in the production of bronchitis. Two factors, one from within and the other from without, seemed requisite. In this patient the bronchial tubes were subjected to microtraumata ("gassing").

The sugar in the urine was probably not caused by true Mendeliam diabetes. Rheumatic patients do not usually take care of carbohydrates well.

✦

Solution by Dr. Simpson

My diagnoses in this case are: Chronic bronchitis and laryngitis due to the inhalation of phosgene gas on July 28, 1918; myocarditis, the result of age and exposure during the war in 1918; tachycardia of unknown etiology; and compensatory hypertrophy of the heart, due to previous rheumatic disease but made worse by exposure to the elements. The chronic cough is, no doubt, due to laryngitis caused by being gassed.

This is my personal opinion, but able consultants have made other diagnoses, such as "No pathologic condition found"; chronic bronchitis, chronic laryngitis, tachycardia, arthritis, hypertrophy of the heart, and chronic myocarditis, all due to exposure during World War I, except the hypertrophy that was due to a previous dilatation of the heart caused by a rheumatic condition.

(*Continued on page 211*)

Clinical Notes and Abstracts

MEDICAL LITERATURE COPYING SERVICE

Microfilm copies of the published papers here abstracted may be obtained from Medicofilm Service of the Army Medical Library at 25c for each complete article, not exceeding 25 pages in length, and 10c for each additional 10 pages or fraction thereof. Prepayment is not requested. Remittance may be made with subsequent orders and in such manner as found most convenient. Address, Medicofilm Service, Army Medical Library, Washington, D. C.

Examination of the Painful Back*

THE patient stands with his back to the light, the spinous processes of all the vertebrae below the sixth cervical are marked with skin pencil, and the sacrum is outlined. A plumb line is dropped from the seventh cervical spinous process, and its relation to the pencil line and sacrum are noted. Any deviation from the normal is recorded. If the line swings away from the center of the sacrum, this may indicate a *short leg* on that side (check by measuring from the anterior superior spine of the ilium to the medical malleolus on both legs), or a congenitally large transverse process of the fifth lumbar vertebrae may impinge on the sacral wing.

The patient should bend forward, backward, and to the sides. If a lesion of the lumbosacral joint is present, muscular spasm in the lower part of the back will cause the spine to bend at a higher level than normal (above the second lumbar vertebra).

The presence of muscular spasm and a definitely abnormal bending level indicates that genuine pain is present.

The patient is asked to indicate with *one* finger the exact point of maximum pain. The physician determines by deep palpation the points of tenderness over the muscles, ligaments, and bony structures of the entire spine. *If the area of greatest tenderness corresponds to the area indicated by the patient, additional confirmatory evidence of localized pathologic change is obtained.*

Sitting: The patient sits on the edge of the table with his spine flexed and his feet on a stool. His shoulders are twisted to the right and left. When he is turned to the right, the right facets are opened in the lower part of the back; if they are involved he will feel pain over this area. On his being twisted to the left, the left facets are likewise moved.

Recumbent: The straight leg raising test is done by elevating the leg with the knee in full extension, while the opposite side remains flat on the table. Limitation of motion, accompanied by pain, is indicative of lumbosacral joint pathologic change, which may be further studied by flexing both hips and knees on the abdomen and then twisting the pelvis to the right and to the left.

The cross-knee test is performed by placing the ankle of one leg across the knee of the opposite extended leg. Pressure is exerted on the flexed knee with one hand while the other hand holds the opposite side of the pelvis flat. This produces a torsion type of motion in the sacroiliac joint on the side of the flexed knee, with resultant pain and limitation of the extent to which this knee may be depressed, when a pathologic change exists in this joint. In further testing the sacroiliac joint, the patient is moved to the edge of the table so that the hip may be hyperextended, while the opposite leg is held acutely flexed on the abdomen.

Fascial tightness test: The patient is turned on his right side, with the right hip and knee flexed. The left hip is hyperextended and left knee is flexed to a right angle. If the left fascia lata is not abnormally tight, the left knee will drop promptly to the table level. The test is then applied with the patient on the left side. The length of both legs and the circumference of both thighs and calves are measured.

Neurologic Examination

Sensation is tested with light cotton touch and by pinpoint. *The outer side of the thigh and calf are somewhat less sensitive than the inner, as the skin over these areas is tougher than elsewhere.* Sensation over the saddle area should be tested, because sensation change in this region may be the result of a spinal cord tumor. The knee and ankle jerks should be tested. The ankle jerk is tested by tapping the Achilles tendon while the patient is lying prone, with the knee flexed and with slight pressure of the examiner's hand against the forepart of the foot. Unilateral absence of this reflex may signify injury of an intervertebral disk. Roentgenograms are made only as confirmatory evidence.

P. M. GIRARD, M.D.

Dallas, Texas.

*Arch. Phys. Ther., July, 1941.

A New Eye Instrument

THE removal of foreign bodies from the eye is often a difficult problem for general clinicians, but it should be less so with a new instrument called Mag-Optin (see Fig. 1),* which consists of a loop of smooth, magnetized wire and a magnifying lens, mounted in plastic, which can be conveniently carried in the bag or pocket or kept in the instrument case.

Courtesy Allergy & Med. Prod. Co.

Fig. 1: Mag-Optin Instrument. *Top,* showing the two parts in use; *middle,* showing how the parts fit together; *bottom,* ready for the bag or pocket.

An ordinary eye spud can do considerable damage to the cornea, in heavy and inexpert hands, but this apparatus seems to be foolproof, and its magnetic properties enable it to remove metallic particles without effort. The price is very reasonable.

✦

Hypochromic Anemia

MORE than 90 percent of the anemias seen by the general practitioner are hypochromic (formerly called secondary).

Causes: (1) A diet deficient in iron; (2) hypochlorhydria; (3) excessive physiologic demands for iron (delivery, pregnancy); (4) acute and chronic infections; (5) blood loss; (6) malignant lesions; (7) parasitic infections; and (8) absence or deficiency of vitamins B or C, or of thyroid hormone.

When a diagnosis of hypochromic anemia is made, every effort must be put forth to find the cause, so as to prevent recurrence of the anemia or development of an incurable malignant process.

Treatment: Ferrous salts are the cheapest and most utilizable, and should be administered with or just after meals. A dose of 5 grains (325 mg.), two or three times daily, is sufficient. There is no necessity for injectable preparations or for mixtures of iron and liver, in these cases. Occasional refractory cases need copper, in addition to the iron. A blood transfusion will aid the recovery of patients with a severe anemia. Plasma or serum should *not* be used, as it dilutes the already thinned blood.

A daily rise of 1 percent in hemoglobin is evidence of an adequate response to therapy.—R. R. KRACKE, M. D., in *South. Med. & Surg.,* Jan., 1942.

*Allergy and Medical Products Co., Cincinnati, O.

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Palliative Treatment of Acute, Undiagnosed Skin Diseases*

THE diagnosis of acute skin conditions is difficult for most practitioners. It is encouraging to know that, *in many of the early acute conditions, the dermatologist may also find it difficult to make a diagnosis,* and to know that the basic principles of treatment are the same for many acute conditions, regardless of the diagnosis or etiology. After a few days, many of these skin conditions will subside without further care.

The term "acute" includes recent severe skin conditions, and also acute recurrences of previous conditions; specifically any acutely irritated skin disorder, accompanied by itching or burning, whether edematous, erythematous, weeping, serous, purulent, urticarial, or papular.

Diet: These foods should be avoided:

1. *Rich* foods, such as nuts, cheese, cocoa, chocolate, etc.;

2. *Cooked grease,* such as fried foods, gravies, pastries, etc.;

3. *Strong seasonings,* such as mustard, catsup, or peppers, and highly-seasoned dishes, such as chili, cured meats, etc.;

4. *Stimulants,* such as alcohol, tea, coffee, and coca-cola;

5. All *coarse* and *raw* foods should be stopped in urticarial eruptions.

Water and other fluids should be used freely. In urticarial conditions or suspected food idiosyncrasies, an initial saline purge may be beneficial; in other conditions, cascara, milk of magnesia, mineral oil, et cetera, but *no phenolphthalein,* may be used.

Environment: The patient, as much as possible, should be kept free from all skin irritants and contacts with chemicals, plants, paints, dusts, animals, et cetera.

Clothing and bedding: No wool or fuzzy material should be permitted to touch the skin. Clothing and bedding should be cool, scanty, and made of linen or cotton.

Internal medication of all kinds, which is being used, should be stopped. Ephedrine, phenobarbital, amytal, and bromides may be used in most cases, but *opiates are contraindicated.* Strontium bromide, given intravenously, may relieve the symptoms. Calcium is indicated.

Local Treatment of the Unbroken Skin

If the skin is itching and burning, without visible eruption, or if an erythematous, papular, or urticarial eruption is present, these methods may be used:

Medicated Baths: Hydrochloric acid (15 drops of dilute hydrochloric acid to each gallon); vinegar (a sponge bath of water and vinegar, equal parts); tar (three ounces of liquor carbonis detergens to a tub); liver of sulphur (an egg- to orange-size piece to a tub); magnesium sulphate; sodium bicarbonate; or table salt.

*Northwest Med., Mar., 1941.

Emollient baths, using bran, oatmeal, or starch. Soap may be used on *unbroken* skin surfaces.

Lotions: Calamine lotions containing antipruritics, such as ¼ to ½ percent of menthol; 1 to 2 percent of phenol; 1 to 2 percent of camphor; 5 to 10 percent of liquor carbonis detergens; or alcoholic lotions and witch hazel; or calamine liniment.

Powders: Zinc oxide, starch, talcum, zinc stearate, bismuth, and other powders are effective, especially if antipruritics are used.

Oils and ointments: Simple oils and ointments containing antipruritics will often give relief.

Broken Skin, with Serous, Non-purulent Weeping

Only the most soothing of local remedies can be safely used, as the primary purpose of treatment is to allay inflammation and change the raw, edematous, weeping surface to a dry, smooth surface.

Baths: Emollient only; no medicated baths and no soap. *Lotions:* Simple calamine without antipruritics; no alcohol, witch hazel, or oil. *Powders:* Simple, non-medicated; do not use powders on hairy surfaces over a long period. *Wet dressings:* These are very effective, and should be used *cool;* mild saline solution (slightly hypertonic), boric acid, magnesium sulphate, Burow's solution (diluted 1 to 15 or 20), acetate of lead (diluted 1 to 20), silver nitrate ¼ percent. *Pastes:* Lassar's paste (plain, no salicylic acid). *Oils:* Use oil (olive oil, salad oil, mineral oil), for cleaning; no soaps, ointments, or antipruritic drugs should be used.

Broken Skin with Purulent Weeping

This type of eruption is sometimes due to bromides or iodides. These conditions are infectious; so it is important that aseptic dressings be employed and that clothing and bedding be as nearly aseptic as possible.

Baths: Potassium permanganate, 5 to 15 grains to the tub of water, or soap and water. *Lotions:* Mercury bichloride (1 to 5 to 10,000); alcohol, 2 to 4 percent; sulphur or ichthyol; 2 to 6 percent resorcin; and ¼ to 10 percent silver nitrate. *Compresses:* Use them *hot* in the presence of infection; potassium permanganate or mercury bichloride (1 to 1,000 or 5,000), boric acid, epsom salts, silver nitrate. *Ointments:* From 3 to 10 percent ammoniated mercury; sulfur and ichthyol. *Ultraviolet rays,* in suberythema doses.

These five agents are useful in early, acute skin conditions. They are mild, soothing, and idiosyncrasy to them is rare.

1. *Starch baths:* One pound package of starch is crushed. Water is added, and heated or mixed with boiling water until the solution is clear, then added to an ordinary bath tub of *lukewarm* water. Let the water dry on the skin or gently pat with soft towel; *do not rub.* This bath is soothing and quieting, and may be used repeatedly, if the skin is not too dry.

2. *Boric solution:* One tablespoonful of boric acid crystals is added to each pint of water, to make a saturated solution. The hands and feet should be soaked in this solution for 1 hour twice daily, or used as a continuous wet compress, changing every ten minutes. Use them *cool* for everything except pus infections or whenever there is an associated lymphangitis, which require hot dressings.

3. Calamine *liniment:* This is the familiar calamine lotion, altered by the addition of olive oil and more glycerine. The effect is the same, except that it is less drying.

4. *Lassar's Paste:* ℞ Zinc oxide .....1 part
Starch powder ..1 part
Petrolatum .....2 parts

This is an effective preparation for use on raw, semiweeping, or mildly weeping surfaces. Three (3) percent crude coal tar is added for eczematoid conditions. The ointment should be removed with olive oil, if soap is contraindicated. These agents, with calamine lotion, ephedrine, and phenobarbital, should control or cure the vast majority of acute skin conditions.

S. E. Light, M.D.

Tacoma, Wash.

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"Functional" Fevers

● Certain children, who have apparently recovered from an infectious disease, continue to show a fever of from 99° to 100° F. They are given this test: Four doses of any coal tar antipyretic are given, at 4-hour intervals, and the temperature recorded every 2 hours. In "functional" fevers, the temperature will be normal 2 hours after the dose, and will rise again 4 hours after. After 24 hours, 1/6 or 1/8 gr. (10 or 8 mg.) of morphine is given hypodermically, and the temperature recorded every 2 hours for 24 hours. If the temperature falls to or below normal for a period of from 10 to 18 hours, the patient is allowed to resume normal activity.—M. Fox, M.D., in *Wisc. Med. J.*, Jan., 1942.

✦

The Patient with a Plaster Cast*

If the early swelling around a fracture is marked when the plaster is applied, one may expect to replace the plaster later, when the swelling has disappeared. A new cast is also necessary if muscle atrophy proceeds to such an extent that the cast does not fit the extremity snugly. An actual crack in the plaster is an even more urgent matter.

If the patient complains of pain in the limb and is unable to move his fingers or toes, which feel cold to the touch or have taken on a bluish or purplish shade that is unaffected by pressure of a fingertip, the cast should be split from end to end and the edges gently eased apart.

Persistent localized pain under a plaster cast must not be ignored. A window should be cut out and the area inspected; otherwise, the patient may complain for a day or two and then feel no pain as the tissues necrose and a pressure sore forms. If a sore forms, it must be dressed with gauze and firm strapping applied to prevent edematous swelling through the window.

Prevention of stiffness: Immobilization does not lead to stiffness, rather it is due to inactivity of muscles and vascular stasis, with resultant fibrosis. Even when a limb is tightly enclosed in plaster the fingers and toes can still be moved so that the flexors and extensors are kept in trim, not to mention the smaller muscles of the hand and foot. A moment's consideration will make it clear that a muscle can be thrown into tonic contraction

**Med. World* (Eng.), Mar. 13, 1942.

without any resulting movement at all, as when the body is braced against a resistance. Immobilization is thus not incompatible with muscular activity. Periods of from 10 to 15 minutes in each hour of the waking day should be set aside for deliberately planned exercises.

STEPHEN POWER, F.R.C.S.

London, England.

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Myalgia in the Head and Neck Pains

THESE conditions indicate myalgia of the head or neck: (1) Localized tender areas are found; (2) the pain rises to a crisis and then declines gradually; (3) the referred pain is irregular in distribution (does not follow nerve root distribution) and regions of referred pain are not tender; (4) use of the involved muscles does not relieve the pain; (5) acetylsalicylic acid (acetosal) gives little relief; (6) attacks commonly occur after exposure to cold, chilly weather, or to drafts; (7) giving nicotinic acid during an attack increases its severity; (8) usually occurs in persons thirty years of age or older; (9) attacks may be brought on by anything tending to increase the tenseness of postural muscles ("nervous" or emotional upsets); (10) the most common previous diagnosis is sinusitis; (11) true neuralgia of the fifth cranial nerve, such as a true trigeminal neuralgia, may accompany the myalgia; and (12) symptoms suggesting vagotonia may be present.

Treatment: Relief is obtained in from one to three weeks by daily applications of heat; light stroking to firm, heavy friction massage; and stretching exercises for the tense muscles.—H. L. WILLIAMS, M.D., and E. C. ELKINS, M.D., in *Arch. of Physical Therapy,* Jan., 1942.

✦

"Heartburn" in Pregnancy

● Hydrochloric acid secretion, in pregnant women, tends to diminish during the later months of pregnancy, and "heartburn" is often complained of by achlorhydric patients. Fluoroscopic and roentgenographic study of the stomach shows no anatomic derangement.

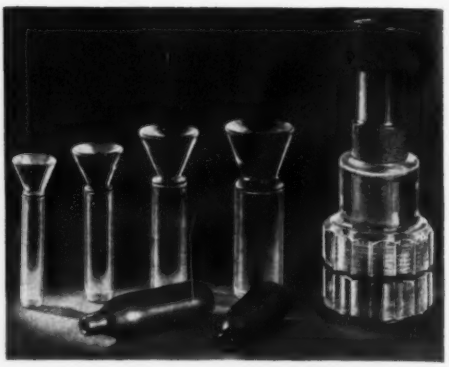
Treatment: Dilute hydrochloric acid (10 to 30 drops with each meal, in one-half glass of fruit juice or water) is given, unless alkalies are indicated by the presence of hyperchlorhydria. Prostigmin (1 to 2,000), 1 cc.,* is given at intervals over an extended period of time, to relax the neuromuscular tension.—*Medical World (Eng.),* Mar. 13, 1942.

✦

*Supplied by Hoffmann-LaRoche, Inc.

A Safe Method of Applying Carbon Dioxide Snow*

IN the treatment of benign or malignant neoplasms of the skin and mucous membranes with carbon dioxide snow, care must be taken that normal tissue is not frozen. With the older methods of cutting pencils from solid sticks, the very brittleness of the material caused it to chip, and these small particles fell on healthy tissue, sometimes with serious consequences if the site of operation was around the eyes or within the body cavities. With the average duration of treatment of from ten to thirty seconds, the point on a solid stick is rapidly melted and a zone larger than the lesion is found to have been included in the treatment. Solidified carbon dioxide packed in metal tubes has the disadvantage of transmission of cold through the sides.



Courtesy Specialties Mfg. Co.

Fig. 1: Specialties Dry Ice Apparatus, complete.

With the apparatus shown in Fig. 1,† the plastic applicators insure complete insulation of the sides, without danger to the operator's fingers or adjacent tissue. The amount of snow remaining in the applicator is at all times visible, and the finger-tip plunger insures that no more than the required amount is at the tip, so that large surrounding normal areas are not frozen.

Several sizes of applicators insure the treatment of all such common lesions as warts, keratoses, angiomas, lymphangiomas, soft corns, and nevi.

Solidified carbon dioxide is formed by piercing a cartridge of carbon dioxide gas (seen in the foreground) and allowing the gas to flow into a cone-shaped expansion chamber (at the right). A patented tamping device, using the excess gas as a motivating force, tamps the snow as it is formed into a compact cone. The lower part of the machine may be unscrewed from the upper part, thus enabling the operator to release the cone of snow from its mold.

A series of applicators, with diameters varying in size from $\frac{5}{32}$ inch to $\frac{3}{4}$ inch, is provided. The snow is forced into the applicators at the tip of the sleeve and is compressed into a hard pencil by means of a plunger or rammer. This is specially beveled so that the pencil formed will not drop

*J.A.M.A., Jan. 24, 1942.

†Apparatus made by Specialties Manufacturing Company, Inc., Bloomfield, N. J.

out of the sleeve, but must be pressed out gently. The operator is then able to regulate the speed of renewal of the snow at the active tip and adjust the pressure necessary for refrigeration.

The machine and the applicators are made of a light, strong, and durable plastic, whose nature is such that it is also completely insulating and assures 100 percent efficiency and volume of snow obtained at the tip.

The snow machine, applicators and a box of twenty-four cartridges are contained in a kit 6½ inches square, which may be put in a physician's bag and conveniently carried to any desired point. Refill cartridges, in boxes of twenty-four, are easily obtained when needed to replace those in the kit. The cost of the apparatus is reasonable, and the method is so simple that general clinicians can use it safely.

C. C. Carpenter, M.D.

Summit, N. J.

✦

Treatment of Paroxysmal Tachycardia

A previously normal heart which suddenly speeds up to 170 or 180 beats per minute is probably suffering from paroxysmal tachycardia.

Treatment: One or more of these methods should be tried: (1) A dose of morphine large enough to put the patient to sleep; (2) any procedure which causes vomiting, such as the use of ipecac; (3) holding the breath in deep inspiration; (4) attempting expiration with a closed glottis; (5) induction of gagging; (6) firm pressure on the eyeballs; or (7) press first on one then on the other carotid arteries in the neck, and finally on both. Pressure should be made at the highest point in the neck at which pulsation can be felt, and must be firm enough to cause slight pain. It is well to massage the artery by moving the fingers slightly while the pressure is kept up.—T. R. Harrison, M.D., in *South. Med. & Surg.*, Oct., 1941.

✦

Sound Records with Electrocardiography*

The recently developed apparatus for recording heart sounds simultaneously with an electrocardiogram has opened up some highly interesting problems of study.

The technic of recording heart sounds (phonography) is much more complex and difficult than electrocardiography, especially with the apparatus which also records the respiratory movements (stethography), which, along with respiratory sounds, mix up with the heart sounds and cause trouble. Patients have to be *trained* to "sit" for these records, because it is hard for them to learn to hold the breath *in expiration*—with children it is impossible, except by devising tricks to hold their interest and make them do it unconsciously, such as having them take seven or eight *deep* breaths *rapidly*, and then "shooting" the record during the brief respiratory pause that follows. All these records are made with the patient in the *prone* position.

Out of a group of patients we examined, 9 showed murmurs on the stethophonogram which had not been previously heard with the stethoscope, but were heard, later, when their *timing* had been ascertained.

These records will not differentiate between organic and functional murmurs; the auricular sound sometimes confuses a presystolic murmur; and a pericardial friction rub may mix up the record of aortic regurgitation. However, the method has distinct value in diagnosis, in the hands of one who has *learned how to use the machine*, and the integration of heart sounds with the electrocardiogram is decidedly helpful in locating the time of murmurs, though it cannot be depended upon for help in directing the course of treatment.

Serial stethophono-electrocardiograms, if made with *constant amplification*, are of great value (the same as *serial* x-ray studies) as *records of transitory conditions* and of progress, and should lead to considerable improvement in our *descriptions* of heart murmurs. Moreover, the accumulation of our records, *as standards*, should have definite instructional value.

Clayton J. Lundy, M.D.
In charge of Electrocardiograph Dept.,
Rush Medical College.

Chicago, Ill.

*Abstract (by G.B.L.) of a talk before the Medical Round Table of Chicago; May, 1942. (The graphs on page 195 in this issue, while made with a different instrument from that used by Dr. Lundy, may well be studied with this report.—Ed.)

✦

Giardia in Children

• These symptoms were noted in a series of children infested with giardia: (1) Recurrent abdominal pain; (2) loss of appetite; and (3) failure to gain weight.

Treatment: Atabrine is given, in ¾ gr. (48 mg.) doses, twice daily to children between two and four years of age; 1½ gr. (96 mg.) twice daily to children of from five to eight years; and 1½ gr. three times daily to those from 8 to 12 years old, for 3 successive days. A laxative dose of magnesium sulphate is given after the final dose. The Atabrine may cause yellowness of the urine, skin, or sclerae, which is no cause for alarm. Symptoms are usually relieved and a cure results when these doses are given. The diagnosis was made, in some cases, by inserting an intestinal tube and aspirating the worms.—E. P. Maris, M.D., in *Penn. Med. J.*, Apr., 1942.

✦

Prevention of Rabies

In an analysis of thousands of persons treated with anti-rabies vaccine, it has been found that there is no clear-cut evidence of the effectiveness of vaccine treatment; one vaccine is no more effective than another; and a delay of 14 days in commencing treatment does not increase the rabies mortality. A bite by a rabid dog, followed by the usual vaccine treatment, results in a mortality of 1 person in 510. The vaccine itself causes paralysis in 1 person out of from 3,000 to 10,000.

Vaccine treatment: All persons bitten *through* the skin by a dog proved rabid should receive nitric acid on the wound and vaccine therapy, consisting of daily subcutaneous injections, for 14 days, of a nonvirulent rabies vaccine proved potent by the mouse test.—L. T. Webster, M.D., in "Rabies" (Macmillan Company, Publishers, New York City).

Contact Dermatitis

CONTACT dermatitis is another skin condition rescued from that all-inclusive term, eczema. It is an inflammation of the skin brought about by the action of animal, vegetable, or mineral substances on the skin surface.

Diagnosis: There is a sudden onset of a severe burning or itching dermatitis, varying from a simple erythema to a papule, vesicle, pustule, or even gangrene. The exposed parts of the body are affected more commonly. Edema of the eyelids and genitalia is marked (if the eruption involves those areas), thus giving a good differential point from an exudative neuro-dermatitis.

Causes: Poison ivy, alkali soaps, orris root face powders; mercury; sulfur; furs; dresses and hair dyes containing paraphenylendiamine; Whitfield's ointment; adhesive plaster; cements, nickel; novocain; mercury and iodine, forming mercuric iodide; geranium; primrose; ragweeds; resorcin; quinine; oils; dyes; solvents; alkalies; and acids.

If the cause cannot be determined by the history, use the **patch test.** On the inner forearm or back, cover one-half inch square with the material to be tested (rub on liquids or apply a thin layer of solids or cloth), moisten with water or perspiration; cover with a larger piece of gauze or muslin; cover this with waxed or oiled silk and tape it on. Examine at the end of 15 minutes, 30 minutes, and one hour. If there is no response, examine again at 24, 48, and 72 hours. If the substance tested results in an acute dermatitis, it is a cause of the eruption.

Treatment: In the very acute stages, use soothing lotions and compresses (Burow's solution, 1:8; potassium permanganate solution, 1,5:000; saturated solution of boric acid); open tense vesicles. When the eruption becomes drier and more scaly, use calamine lotion with olive oil. Use no soap or water at any time.—I. SWARTZ, M.D., in *N.Y.S.J.M.*, May 15, 1942.

✦

Coronary Attack: Treatment, Prognosis

MORPHINE, in ¼ or ½ gr. (16 or 32 mg.) doses, should be given at once in acute coronary occlusion. If relief does not appear in 1 hour, give an ounce of *whiskey*, and *oxygen* by inhalation.

Tincture of opium gives good mental and physical relaxation in elderly patients. Other treatment is often meddlesome and frequently slows recovery. If *congestive heart failure* appears, give *Salyrgan* (1 cc., intravenously, every four or five days) and hypertonic dextrose (10 to 50 cc. of a 50-percent solution, intravenously, every day).—F. A. WILLIUS, M.D., in *N.Y.S.J.M.*, Mar. 1, 1942.

Prognosis: Out of 202 patients who survived an acute attack of coronary occlusion, clinical recovery was good in one-third and poor in two out of five. Cardiac symptoms were present in one patient out of three; *dyspnea* was the most common and sometimes the only symptom. One patient out of four had chronic congestive heart failure.

Persistent diminished amplitude of the heart sounds, particularly the first apical, was observed in 100 patients. This may be of diagnostic value in patients past 40 years of age who are suspected of having coronary disease. In 160 patients, a normal rate and rhythm were found. Hypertension, which had been present in two-thirds of the patients prior to the attack, was found in only one-third after recovery. One-half of the patients were able to resume their former occupations, either full or part time.—A. M. MASTERS, M.D., in *N.Y.S.J.M.*, Mar. 1, 1942.

Splints on Joints

A NORMAL joint, with normal periarticular tissues, can be immobilized *in a position of rest* almost indefinitely, without producing troublesome rigidity of the joint. If a joint is put in extreme flexion or extension, rigidity follows owing to the stretching of ligaments and the formation of adhesions around the point of strain.

In the application of a splint, bandaging must not interfere with the normal blood flow. If a muscle is paralyzed, splintage is used solely to prevent overstretching of inactive muscle fibers during the period of loss of nerve stimulus.—T. P. MCMURRAY, M.D., in *Brit. J. Phys. Med.*, Feb., 1942.

✦

Atrophic Arthritis

THE patient with atrophic arthritis (arthritis deformans) is suffering from a chronic disease, somewhat resembling tuberculosis, which calls for a similar type of treatment—long-continued *rest*, definitely prescribed, and physical and psychic hygienic measures, in addition to medication.

To keep him from "shopping around," he must be frankly told that he will be ill for months; that recurrences and relapses are part of the picture of his disease; and that he should not expect too much from any one method of treatment—medical, surgical, dietetic, physical, or psychic—that may be used. In this way his confidence and cooperation can be gained.

For drug medication in these cases, salicylates are still most satisfactory, and a combination of acetylsalicylic acid with calcium glutamate* has been found definitely superior to other forms of these salts.† In the stomach, this mixture forms the highly soluble calcium acetylsalicylate, which is relatively nonirritating, readily absorbed, and prompt in action, and is usually well tolerated by patients who cannot take aspirin.

The diet should contain abundant vitamins B, C, and D, minerals, roughage, fats, and proteins.—EUGENE F. TRAUT, M.D., in *Ill. M. J.*, Mar., 1942.

✦

Powder Treatment of Infected Ears

THE chronically discharging ear of chronic suppurative otitis media should be treated with powder gently blown into the ear. Boric acid and iodine powder may be used, or sulfanilamide powder. The middle ear cavity should be first gently cleansed with small, cotton-tipped applicators, or gently irrigated with 70-percent alcohol. The treatments should be repeated every two to five days, depending upon the amount of discharge. If one powder is not effective, the other should be tried.—*E.E.N.T.M.*, May, 1942.

[Several inexpensive, hand-bulb powder blowers are available. John Wyeth, of Philadelphia, furnishes a sturdy model in a compact case, which is used for insufflating silver picrate powder into the vagina in treating trichomonas vaginitis. In a few cases, silver picrate powder has been effective when the two powders above had failed. Your own pharmacist can make up this formula for the iodine powder:

℞ Iodum ..... gr. v
Ethyl oxide ..... dr. i
Pulv. acidi borici ..... 3 i

This powder keeps well, if placed in a tightly closed bottle.—ED.]

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*Calsamate, Lakeside Laboratories, Milwaukee, Wis.
†Stutzman, Orth, and Mellish, in *J. Pharmacol. & Exp. Therap.*, Dec., 1941.

Simplified Barium Meal

Two types of x-ray films are required to rule out cancer or ulcer of the stomach: (1) A thick barium suspension, to completely fill out the stomach and outline the greater and lesser curvatures; and (2) a thin suspension to delineate the gastric rugae. By use of this new, inexpensive preparation (which can be made anywhere), both views are shown on one film, thus saving time and films.

Seven (7) ounces of water are stirred thoroughly with 20 grams of a mixture containing 4 parts of barium sulfate, one part of gum acacia, one part cocoa, and one part granulated sugar, by volume. The meal is taken and films are made as usual; no compression is needed.

Interpretation: In the presence of benign ulceration, the neck of the ulcer is present; in malignant ulcers, the neck is lost, producing the meniscus sign. When the ulcer is benign, the rugae are preserved and may show convergence; with a malignant ulcer, the rugal pattern is lost and the mucosa appears granular. With a benign ulcer, there is a uniform density in the niche; with a malignant ulcer, the density may be irregular.

This barium meal can also be used in studying the colon.—M. H. Poppel, M.D., in *Radiol.*, May, 1942.

✦

Government to Pay for Hospitalization of Civilian Casualties

Government funds have been allocated to the U. S. Public Health Service to reimburse all hospitals that care for civilian casualties resulting from enemy action, at the rate of $3.75 a day.

Certain institutions in "safe areas" may be designated as Base Hospitals, and older local physicians and those who have certain physical disabilities, who serve in them, will be commissioned in the U. S. Public Health Service, with rank, pay, and allowances equivalent to those of the Medical Corps of the Army.—*J. A. M. A.*, April 18, 1942, p. 1374.

✦

"Cabulances"

On march 27, the District of Columbia saw its first mass demonstration of the use of taxicabs equipped with litters — "cabulances" — for the transportation of simulated civilian casualties. More than a hundred of such cabs (and also a number of delivery trucks) picked up emergency squads of doctors and nurses and their aids at 18 hospitals, and then continued to pick up "bomb victims" and take them to hospitals.

✦

Allantoin Produces Leukocytosis

Experiments on rabbits and dogs have shown that Allantoin, given intravenously, intramuscularly, or by mouth, produces a definite neutrophilic leukocytosis, which is more prompt and positive when the drug is given intramuscularly, especially if freshly-prepared solutions are used.

This action may well be a factor in the pronounced beneficial action which this drug exerts upon the healing of wounds.—Frederick R. Greenbaum, D.Sc., in *Med. Rec.*, Apr. 14, 1940.

✦

There is so much "meat" in Clinical Medicine that one can get what one wishes to know without reading volumes.—G.A.S., M.D., Calif.

The Tuberculin Patch Test

The tuberculin patch test detects 99 percent of persons with tuberculosis. The patch* is placed over a site that has no hair, such as the flexor surface of the arm or forearm; or the interscapular area, in children.

The skin is rubbed briskly with acetone until a definite hyperemia appears, the patch is applied firmly, and a piece of adhesive about one by five inches is applied over the patch, to keep the edges from turning up. The patch *must not become wet.* It should be removed in 48 hours, and 48 hours later the test is read. It is positive if one or more follicles appear (red macule, papule, or vesicle).—P. N. Narodick, M.D., in *Northwest Med.*, June, 1942.

The Seminar

(*Continued from page 204*)

Problem No. 7 (Medical)†

Presented by Nathan Flaxman, M.D., Chicago, Ill.

A man of 55 years complained of persistent epigastric distress, which was not influenced by change in diet, alkalies, or anti-spasmodic medication. "It feels like a brick lying here," or "Something is pressing here," were his complaints, and he pointed at the epigastric area. This symptom had been present for 6 months. He had no other symptoms of any type.

His past history revealed the usual childhood diseases, which had been uncomplicated. He had always been in good health. There was no family history of chronic disease of any type.

He had consulted several physicians, whose diagnoses had varied and whose treatment had been entirely ineffective.

Examination: Blood pressure, 132/86; ear, nose, and throat, normal; the heart was of normal size, regular in action, and without murmurs; pulse 80; the temperature varied from 97.5° to 98.5° F.; abdominal and rectal examinations and several electrocardiograms were negative; gastric acidity was normal; there was no occult blood in the gastric contents or stool; roentgenograms of the gastrointestinal tract were normal.

Gallbladder roentgenograms were made the following month, when he began to complain of *upper abdominal pain,* more marked in the right upper quadrant and not influenced by eating or medical treatment, but they showed only a normally functioning organ without stones. Tests for pancreatic disease and repeated urinalyses were negative.

No diagnosis could be made at this time. One month later, palpitation appeared and râles were found at the bases of both lungs. The liver was enlarged and tender; the heart irregular in strength and rhythm of its beats.

Requirements: State your tentative diagnosis and what further studies you would have made, *giving reasons;* outline your treatment.

*Obtainable from Lederle Laboratories, New York.
†Adapted from a medical magazine.

Medico-Military Notes

Qualifications of Air Pilots

PROBABLY no other demands on the human physique are as severe as those on the crews of combat planes. In referring to those who are exploding their energy in combat, draining it unceasingly in long flights, freezing at great altitudes, trusting to gas tanks for their life-sustaining oxygen, plunging from the substratosphere almost to the surface, and whose very lives hang continually upon slight margins of accuracy of judgment and quickness of action, as well as upon Fate, such words as strength, endurance, coordination, and courage, in their ordinary meanings, are quite inadequate. It is clear why only those between the ages of 18 and 26 are eligible for the air service, and why only a part of those within these age limits can qualify.

It is, however, the mental and educational qualifications that are of chief interest in this connection. More than ordinary intelligence is required to understand and operate such complicated and delicate machines as airplanes. A high order of intelligence is necessary in order to master, in the available time, the science that is necessary for a navigator, including such subjects as the celestial sphere and spherical trigonometry, the principal bright stars and their diurnal motions, methods of rapid and accurate computation, the use of sextants and related instruments, dynamics of rigid bodies and the elements of aerodynamics, the fundamentals of meteorology, and radio and photography. Obviously a good knowledge of all of these subjects is necessary in order to guide safely a plane hundreds and perhaps a thousand miles in darkness, in storms, through winds, over misty seas to unknown targets, and then return. The navy has always required four years at Annapolis and months of experience at sea in order to teach a man to navigate a ship. Now both the Army and the Navy must teach tens of thousands of young men in a few months to perform tasks that are as difficult.—*Am. Assn. for Advance. of Sci. Bull.*, Mar., 1942.

✦

Commissions for Dental and Veterinary Students

STUDENTS in dental and veterinary schools can now be commissioned as second lieutenants, Medical Administrative Corps, in the same manner as Medical Students (see abstract in CLINICAL MEDICINE, April, 1942, page 114).—*J.A.M.A.*, May 16, 1942, p. 272.

✦

No Dependency Deferment for Doctors

IT has recently been ruled by the Selective Service authorities that, in classifying physicians, dentists, and veterinarians, members of these professions shall not be deferred on account of dependents, since the pay they would receive as commissioned officers in the armed forces is considered adequate to take care of their families.—*J.A.M.A.*, May 16, 1942, p. 268.

Selective Service Notes*

BASED on present physical standards, about one million men, out of about two million examined, were qualified for all type of military service, and at least 500,000 were qualified for limited duty. The accompanying chart shows the proportions of the major causes for rejection for full military service of 900,000 men. The other 100,000 were rejected for lack of educational qualifications.†

It is estimated that 200,000 of the rejected men can be rehabilitated so that they can perform full military service.

✦

Nerves and the War

MORALE means steady nerves, clarity of purpose, a determination to preserve our basic pattern of life, and conviction of ability to win. Morale actually may win the war.

The human organism is geared to nerve functioning. When thoughts and feelings are upset, man's whole activity in daily living is interfered with. Ordinary fears and threats are magnified.

To the young child, his parents represent the adult world. Through them he learns to distinguish good and bad, right and wrong, and to live with others as a balanced social being. If they and other adults, such as teachers, do not fail him, his ideals are happy and normal.

Adults, too, have a need of someone to rely upon. They depend upon their priests and ministers; elect leaders in whom they believe, to give them legal safeguards; and read the works of writers whose integrity and judgment they trust. If these fail them, adults experience the same feelings of insecurity and conflict that befall the child in a divided home. Their anxiety and fear are transmitted to others, and become major threats to good morale.

Physical factors play an important part. Fatigue, undernourishment, and exposure lower one's resistance to physical disease, and also to psychic disorders. Fatigue which normally creates edgy nerves, in war time becomes a menace to morale.

Morale remains high when individuals can feel that they are able to take constructive steps to preserve their unity and safety. Working together and playing together in groups increase one's feeling of securely belonging somewhere.

It is dangerous to treat lightly those who are unstable and predisposed to nervous upsets. In times of stress, these civilian casualties should be hospitalized or moved to quiet zones, and should have the attention of a psychiatrist.—THEOPHILE RAPHAEL, M.D., in the *Kiwanis Magazine*, May, 1942.

*Abstracted from Medical Statistics Bulletin No. 1, National Hdqrs., Selective Service System.

†The minimum educational requirement is to read and write English as well as a fourth-grade grammar school student.

Diagnostic Pointers

"Neurasthenia" and Brucellosis

• Many chronic, ambulatory, "neurasthenic" patients are suffering from chronic brucellosis (undulant fever). Very few of these patients have had acute fever which was compatible with a diagnosis of acute brucellosis. The only procedure by which the diagnosis of this disease can be made positively is by the cultivation and identification of the organism from the patient's blood. The agglutination test and skin test are of value in the diagnosis of *acute* brucellosis, but are inadequate in the diagnosis of the chronic form.—W. M. Simpson, M.D., in *South. Med. & Surg.*, Dec., 1941.

Foot Cramps

• Cramps in the feet may be the first symptom of calcium deficiency.—Lee Hill, M.D., "Idiopathic Hypoparathyroidism," before the Des Moines Academy of Medicine, Dec. 17, 1941.

[If the toes are flexed toward the sole, this may be considered as a definite sign of a low blood calcium level as the "obstetric" or carpo-pedal hand of calcium deficiency.—Ed.]

Abdominal Pain

• Pain related to meals is often due to a colonic disorder ("spastic colon"), and is located *below the umbilicus*, while gastric or duodenal pain is constant in location, high in the epigastrium.—M. E. Shaw, M.D., in *Brit. Med. J.*, Sept. 21, 1941.

Test for Vitamin B Complex Deficiency

• To test for a deficiency of vitamin B complex, urine is collected for a period representing one hour's excretion, following an overnight fast of 12 hours. This specimen is analyzed for thiamin (B_1), riboflavin, and niacin (nicotinic acid). The values obtained appear to depend upon the body stores. When the excretion of these factors in the one-hour specimen falls to zero, it is likely that the borderline of deficiency has been reached and that the body has no surplus of vitamin available for excretion. Even if no symptoms are present, the diet should be supplemented by those factors of the B complex which are low.—L. E. Holt, Jr., M.D., in *Bull. Johns Hopkins Hosp.*, March, 1942.

Fractured Wrist

• A fractured wrist may simulate a sprain. Without x-ray examination, a fractured scaphoid is commonly missed. An oblique view (perpendicular to the long axis of the scaphoid) may be necessary to show a transverse fracture of its waist.—G. R. Girdlestone, F.R.C.S., in *Brit. Med. J.*, Feb. 22, 1941.

Urinary Obstruction

• If pus in the urine of infants or children does not promptly disappear after medical therapy, intravenous urography should be carried out to discover the presence of obstruction in the ureters or bladder.—J. E. Heslin, M.D., in *N.Y.S.J.M.*, Apr. 15, 1942.

Electrocardiograms

• The electrocardiographic tracing is not pathognomonic of any condition. The cardiogram may suggest a serious lesion, yet the patient may live a number of years; another patient may die in a few hours after a cardiogram that seems to promise a number of years of activity.—V. E. Simpson, M.D., in *South. Med. J.*, Dec., 1940.

Abdominal Pain in Infants

• Abdominal pain may be poorly localized in infants and young children, or only noted on defecation or micturition. A rectal examination should be made on every youngster with abdominal pain, or appendicitis, intussusception, or rectal impaction may be overlooked.—G. Parker, M.D., in *Ill. Med. J.*, Feb., 1941.

Hoarseness

• Every case of chronic hoarseness should be carefully and promptly investigated, to determine or rule out, first, the presence of *syphilis, tuberculosis,* or *cancer,* one of which is found in most of such cases. Early *intrinsic* cancer of the larynx is relatively benign and curable.—George L. Tracewell, M.D., in *J. Okla. St. M. A.*, Oct., 1941.

Heart Contusions

• Contusions of the heart, from being thrown violently against a steering wheel, are not uncommon, and are suggested by persistence, following an accident, of precordial pain, dyspnea, tachycardia, cyanosis, irregular beats, and "tick, tick" heart sounds. Treatment is symptomatic—sedatives, oxygen, and rest in bed until the symptoms subside.—*Hawaii M. J.*, Nov., 1941.

Thumbnail Therapeutics

Allergy

• In treating any allergic patient, the first food to be suspected is milk, as it causes 40 percent of allergic diseases (hives, vasomotor rhinitis, migraine, asthma). Even if skin tests are negative, the patient should be put on a milk-free diet, which must also exclude milk-containing foods, such as bread.—M. T. DAVISON, M.D., in *South. Med. J.*, Feb., 1942.

Corneal Ulcer and Inflammations

• Corneal ulcer, superficial keratitis, and corneal opacities are rapidly benefited by ascorbic acid (vitamin C), given hypodermically in 50 mg. doses daily.—F. V. GAMMAGE, M.D., in *E.E.N.T.M.*, Apr., 1942.

Sulfanilamide Suppository for Anal Disorders

• Symptomatic relief and treatment of non-suppurative anorectal inflammatory diseases can be provided by the use of suppositories* containing 1 percent of sulfanilamide and a local anesthetic (Metycaine). After minor rectal operations, such suppositories provide prolonged relief of burning and pain.—H. LAUFMAN, M.D., in *Am. J. Dig. Dis.*, Apr., 1942.

Prevention of Paroxysmal Tachycardia

• Attacks of paroxysmal auricular tachycardia are best prevented by the administration of digitalis, 1 to 1½ cat units per day.—T. R. HARRISON, M.D., in *South. Med. & Surg.*, Oct., 1941.

Corneal Ulcer

• The course of serpentine and other forms of corneal ulcer may be shortened by the administration of sulfanilamide or sulfathiazole. Dacrocystitis, lid phlegmon, and gonorrheal opthalmia are also benefited.—*E.E.N.T.M.*, Feb., 1942.

*Developed by Eli Lilly Company, Indianapolis.

Chronic Pelvic Pain

• Chronic pelvic discomfort, or "painful pelvis," is usually caused by an infected cervix and resultant lymphangitis in the parametrium. By conization (or electrocoagulation) of the cervix, we have almost eliminated the operation of hysterectomy for chronic pelvic disease.—M. W. SEARIGHT, M.D., in *South. Med. J.*, May, 1940.

Iritis

• Iritis (uveitis) is greatly benefited by daily short-wave treatments—*E.E.N.T.M.*, Feb., 1942.

Achilles Tenotomy In Foot and Ankle Fractures

• In cases of Pott's fracture, supracondylar fracture of the femur, and fracture or dislocation of the astragalus or os calcis, tenotomy of the Achilles tendon permits easier reduction of the fracture and better function follows, as the limb is more easily maintained in proper position during immobilization, with less trauma.—G. ARNOPOL, M.D., in *Med. World*, Feb., 1942.

Asphyxia in the Newborn

• Stimulation, by stroking the hard palate with gauze, will result, reflexly, in contraction of the abdominal muscles and initiation of respiration.—N. BOGRAD, M.D., in *South. Med. J.*, May, 1940.

No Epinephrine In Digit Surgery

• The addition of epinephrine to the procaine solution used in local anesthesia of a finger or toe may result in gangrene. A 1- or 2-percent procaine solution may be used with perfect safety.—L. PELNER, M.D., in *N.Y.S.J.M.*, Mar. 15, 1942.

Venereal Warts

• Condylomata acuminata may be treated by the application of 25 percent podophyllin in mineral oil. It should be used only once and not too liberally. Pain appears in from 6 to 8 hours and may require morphine for its relief. The condylomata slough off and the tissues return to normal. There has been no scarring or recurrence. A weaker solution causes as much pain and requires repeated applications.—I. W. KAPLAN, M.D., in *New Orleans Med. & Surg. J.*, Feb., 1942.

THE DOCTOR'S STUDY

New Books

Any book reviewed in these columns will be procured for our readers if the order, addressed to CLINICAL MEDICINE, Waukegan, Ill., is accompanied by a check for the published price of the book.

A book is simply a convenient receptacle for facts, ideas, and emotions gathered by members of our race during their progress through life.—LEWELLYN JONES.

Rabies

Webster

RABIES. *By* LESLIE T. WEBSTER, M.D., *The Rockefeller Institute for Medical Research, New York. The MacMillan Company: New York. 1942. Price, $1.75.*

THE physician who has felt confused about rabies (hydrophobia) need be so no longer. This inexpensive little book gives, concisely, the important points on diagnosis and prevention.

By inoculating 500 dogs with rabies, the author has found two clinically distinct forms (the "dumb" or paralytic rabies and the furious rabies) which pursue typical courses. He has also found that *many rabies vaccines do not prevent the disease,* when used under *controlled* conditions (this is well to know if your own child is bitten by a mad dog). A new test is given for determining the potency of a vaccine.

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Neuro-Anatomy

Spofford

NEURO-ANATOMY. *By* WALTER R. SPOFFORD, B.S., Ph.D., *Instructor in Anatomy, Vanderbilt University Medical School, Nashville, Tenn. London, New York, Toronto: Oxford University Press. 1942. Price, $2.00.*

THIS is one of the Oxford Medical Outline Series, in which a subject is presented in outline form, without illustrations and elaboration. Every other page is blank for students' notes and drawings.

In 100 pages, the author has condensed the important points of neurolgic anatomy. An amazing amount of information has been packed in concerning the structure of the central nervous system. Neurophysiologic points are often furnished in subdivisions. This book simplifies one of the most difficult studies in medicine.

✦

Minor Surgery

Oman

MINOR SURGERY. *By* CHARLES M. OMAN, M.D., F.A.C.S., *Rear Admiral, Medical Corps, U. S. Navy; Commanding Officer, Naval Medical Center, Washington, D. C.; Member of the National Board of Medical Examiners; etc. Oxford Medical Outline Series. New York, London, Toronto: Oxford University Press. 1942. Price, $2.00.*

THIS small volume presents, in outline form, the diagnostic and therapeutic essentials in the practice of minor surgery. No illustrations are included. The descriptions are terse and to the point.

Much of the text is admirably modern (non-dressing of wounds of the face; use of splints to hasten healing in wounds; instillation of mercurochrome after catheterization for retention of urine). No mention is made of the non-traumatic method of reducing shoulder dislocations (Zierrold, University of Minnesota).

It is good to have the brevities of practice reduced to an A, B, C, outline, so that one can *quickly* review one's methods and find gaps in one's knowledge.

✦

Diseases of the Skin

Knowles, Corson, Decker

DISEASES OF THE SKIN. *By* FRANK CROZER KNOWLES, M.D., *Professor of Dermatology, Jefferson Medical College, etc.,* EDWARD F. CORSON, M.D., *Clinical Professor of Dermatology, Jefferson Medical College, etc.; and* HENRY B. DECKER, M.D., *Assistant Professor of Dermatology, Jefferson Medical College, etc. Fourth Edition, thoroughly revised; 272 illustrations. Philadelphia: Lea & Febiger. 1942. Price, $7.00.*

THIS is a practical text of skin diseases. It avoids the tedious verbosity of longer dermatologic works and the useless brevity of the outlines.

One of its most useful sections is that on the diagnosis of skin disease by location. Another clue to the diagnosis of skin diseases is given by the section on types of lesions found in common diseases of the skin.

Treatment, both internal and external, is fully given. The illustrations are numerous and well chosen to give a lifelike picture of the disease.

✦

Tropical Medicine

THE WAR OFFICE MEMORANDA ON MEDICAL DISEASES IN TROPICAL AND SUBTROPICAL AREAS. *Reprinted by permission of the Controller of His Brittanic Majesty's Stationery Office. First American Edition. Brooklyn, N. Y.: Chemical Publishing Company. 1942. Price, $4.75.*

ARRANGED alphabetically in this handy, leather-bound volume are 36 diseases especially encountered in the tropics. These illnesses are of special import now, because thousands of our soldiers, and their medical officers, are on their way to the countries at the level of the equator.

The various worms and parasites are given complete coverage, together with sketches illustrating their appearance. Full details of treatment are given, and cautions when strong therapeutic agents are used. Differential diagnosis is sufficiently complete, so that this one easily-transported volume could serve as a manual of diagnosis and treatment.

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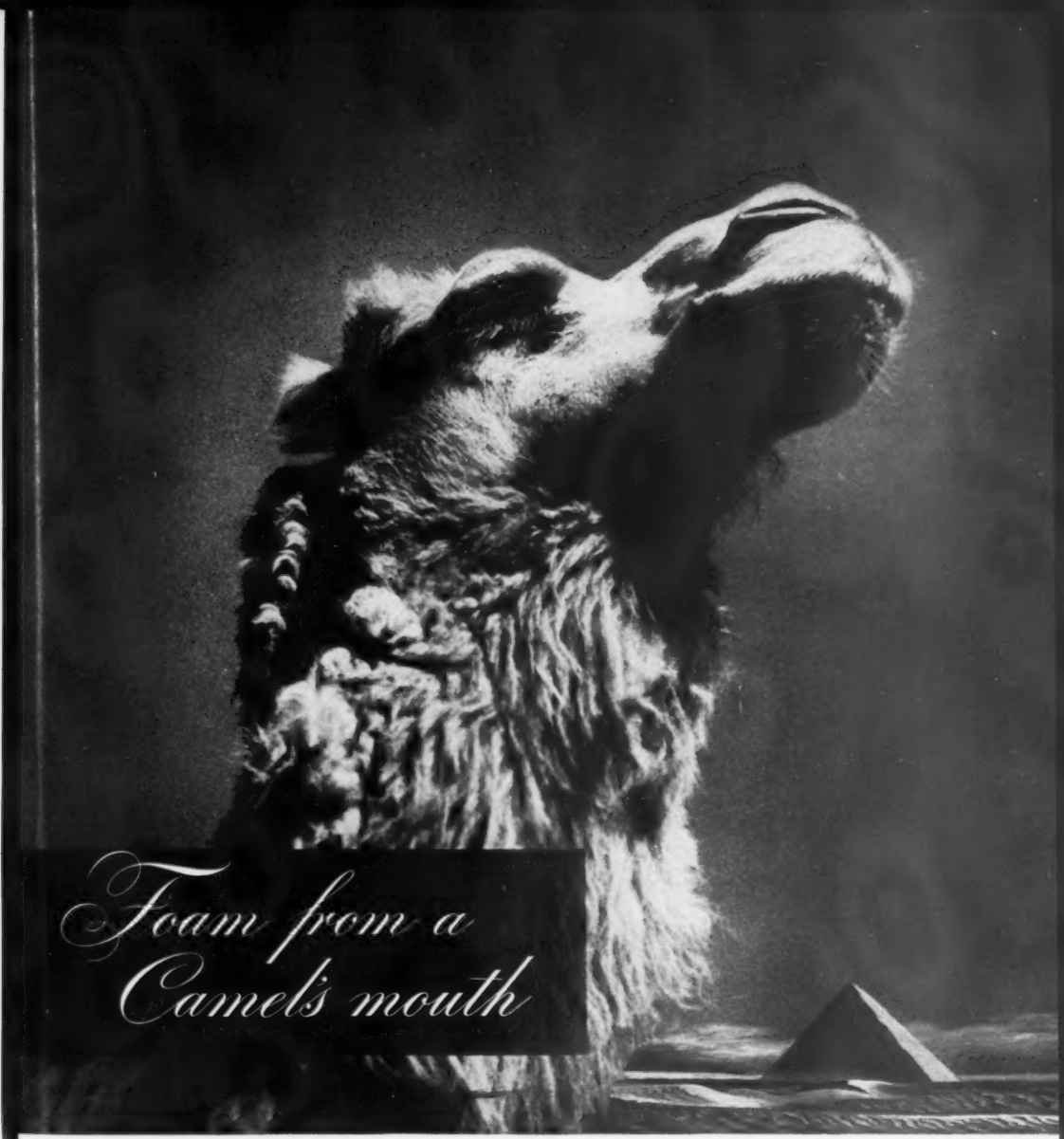

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